

ELECTRONIC COMPONENTS AND HUMAN INTERVENTIONS:
DISTRIBUTING TELEVISION NEWS ONLINE

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ELECTRONIC COMPONENTS AND HUMAN INTERVENTIONS:
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This manuscript examines distribution of television news products online, and includes case studies from observation and interviewing at the sister companies, MSNBC.com and MSNBC TV. In particular, I focus heavily on the cases of The Rachel Maddow Show, a news program that created a unique and highly popular Web presence; a team of Web producers at MSNBC.com responsible for handling television content; and Newsvine, a subsidiary of MSNBC.com that has built much of the infrastructure on which MSNBC television sites are based. I argue the forging of distribution paths is best understood through the frameworks provided by the sociology of socio-technical systems, and using the cases at hand, illustrate the implications of this perspective for sociological perspectives more commonly used to study media organizations. I use John Law's framework of heterogeneous engineering, in tandem with insights from other sociologists of systems, as a springboard to examine the manner in which MSNBC.com has assembled diverse resources into a working, but highly dynamic, system of online distribution for television. I argue large contemporary media organizations are best understood, not as single, monolithic system builders, but as assemblages of myriad heterogeneous engineers pursuing related, but provincial objectives. In particular, I explore what MSNBC looks like if we examine it, not from a top-down, hierarchical point of view, but as a

collection of resources enrolled in various ways in distinct systems assembled by Newsvine and The Rachel Maddow Show. I demonstrate that what a system looks like and who counts as a system builder are relative notions that depend on the vantage point of the observer, and argue as a result that organizational boundaries are in many ways problematic as analytical categories. Rather, organizational boundaries are actor categories—resources that do work on behalf of particular system builders, and the agents responsible for distribution often span them. I examine what it means to think about distribution systems in this way and explore some common strategies for circulating information in such an environment. I conclude by exploring the implications of this extended examination of distribution for our understanding of the contemporary media landscape.

BIOGRAPHICAL SKETCH

Joshua Braun holds a masters degree in communication from Cornell University and another in bioethics from the University of Pennsylvania, as well as a bachelors degree in “science in the media” from UC Santa Barbara’s individual studies program. He is a former graduate fellow of the National Academy of Sciences. He currently focuses on online distribution of television and news, and has also published in the fields of medical ethics and risk communication. In non-academic capacities, he has worked as a science journalist for NPR, *Scientific American* Online, and *Seed Magazine*, where he covered diverse topics ranging from nuclear security to deep-sea oceanography to prison reform. He began his professional career in journalism in 2005 as a production intern for ABC News’ Nightline.

This thesis is dedicated to my family, who supported—in every sense—my desire to figure out how things worked whenever I was intrigued by them, and especially to my wonderful wife, Sarah, without whom none of this would have been possible.

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TABLE OF CONTENTS

Biographical Sketch	iii
Dedication	iv
Acknowledgements	v
List of Figures	viii
Epigraph	1
Chapter One // Introduction	2
Online Television News Distribution	6
Newsvine	8
The Rachel Maddow Show / MSNBC.com New York	9
Field Study	11
Structure of the Dissertation	14
Chapter Two // Forging Distribution Paths	19
The Conversation Economy	24
Toward a Theoretical Framework for Digital Distribution	29
Celebrating the Kludge	31
Threading Needles	35
Technologies as Heterogeneous Artifacts	39
The Example of Time Delay	42
Heterogeneous Distribution at MSNBC TV and MSNBC.com	43
Flipping Video	44
Pressures on the System	48
Placing Online Video	57
Pressures Surrounding the Video Player	62
Cross-Platform Distribution	78
Pressures on Cross-Platform Distribution	81
Video Syndication and Embedding	93
Online Video Syndication	93
Pressures on Video Syndication	96
Embeddable Video	103
Chains of Custody: Engineering for the Conversation Economy	107
Other Uses of the Embedded Player	120
Chapter Three // Breaking Apart the Monolith	127
Breaking Apart the Monolith	129
Provincialism and the Sociology of Technology	133
Some Additional Tools for Thinking With	141
Preliminaries	147
Newsvine	148
Engineering Newsvine	152
The Solution Stack: All the free stuff, but we didn't want to skimp	152
The Initial User Base: Friends of mine, friends of theirs	155
The Public User Base: An aspirational philosophy of user behavior	157

The Business Model	179
Newsvine Becomes an MSNBC.com Property	182
MSNBC.com as Heterogeneous Engineer	191
A Post-Acquisition Newsvine	195
The Solution Stack: The Only Unix Guy at MSNBC	196
The User Base: That's not really acceptable behavior on Newsvine	200
Inventing our Future: Building systems for MSNBC.com	211
I Thought This Was About Television	216
The Rachel Maddow Show	219
Engineering TRMS	220
Preliminaries	220
"Everything Has to Wait"	224
Marshaling Resources	232
A Full-Time Web Producer	232
Using Outside Services	238
Faking Blogware: Everything that my client wants, they're going to get.	242
Hand-in-Glove: The Maddow Blog is Born	245
TRMS' Web Presence	257
A Possible Cable Site	261
Final Thoughts	267
Chapter Four // Mass Reach Without Mass Media	274
Systems of Knowledge	275
On Epistemic Cultures	277
Some Important Caveats	280
Boundary Objects and Trading Zones	281
Boundary Objects	283
Trading Zones	284
Distribution Trends at MSNBC.com	286
Proliferating Brands	287
Changing Platforms	295
Newsvine's M3 Platform	296
SkyPad	302
Generality in the Service of Specificity	305
Mass Reach Without Mass Media	306
The Comment Problem	307
Newsvine Groups 2.0	314
Friends of Thine and Friends of Theirs	319
Emergent Qualities of Distribution Systems	322
Closing Thoughts	326
Chapter Five // Conclusion	330
References	336
Appendix A // Common Terms and Acronyms	374
Appendix B // Notes on Methods	376

LIST OF FIGURES

Figure 2.1 // Video Transcoding	45
Figure 2.2 // Show Front	59
Figure 2.3 // Standalone Video Player	60
Figure 2.4 // The MSNBC.com Cover	66
Figure 2.5 // The Bing Video news page	95
Figure 2.6 // <i>Doonesbury</i> from February 27, 2011	99
Figure 2.7 // The ‘clip & share’ Interface	105
Figure 2.8 // The ‘share your own subclip’ Interface	105
Figure 3.1 // Isometric Pressure Illustration	146
Figure 3.2 // Vineacity Illustration	170
Figure 3.3 // The Newsvine Homepage	185
Figure 3.4 // M2 Customizable Profile Page	186
Figure 3.5 // Newsvine Module Directory	187
Figure 3.6 // The Rachel Maddow Show Microsite	229
Figure 3.7 // The Maddow Blog	256
Figure 4.1 // Blog Designs	301

“For most of us most of the time a television set is a single and coherent object which we take as essentially unproblematic. However, when it breaks down, it rapidly turns into a network of electronic components and human interventions.”

—John Law, 1992

chapter one // introduction

Sitting on my desk right now is a volume with the imposing title, *News: A Reader*, edited by venerable journalism studies scholar Howard Tumber, which upon its publication in 1999 represented the state of the art in journalism studies. It is divided into the field's major topics of study, "Definitions of News," "Production of News," "Economics of News," "Sources of News," and "Objectivity and Ideology of News." Schudson's 2003 book, *The Sociology of News* carves up the terrain similarly, though it also includes a sizable section on audience effects. Generally absent from such compendia and the literature they represent is any discussion of news distribution practices. Not, anyway, the sort of practices we think of when we think of the canonical ethnographies written over the years on newsroom practices, where we learn the names—or at least the pseudonyms—of reporters, copy chiefs, and managing editors, and watch as the impact of their decisions on media products is traced out in living color. Rather, the concerns of media sociologists skip from production practices to audience effects, leaving a gulf when it comes to the actual process of getting news products out into the world. The perigee here may come in the form of research on the economics and regulation of media industries. But while these are concerns that may bound or impress themselves upon distribution practices, to study them is not the same as to examine the mechanics of distribution decisions made in these industries or the lived experience of distributing the news.

In many ways, it's understandable that such issues would lie at the periphery of media sociologists' focus. After all, the print distribution routes and networks of broadcast affiliates that underpinned the activities of leading news organizations appeared relatively stable for much

of the Twentieth Century. Occasionally a pallet of newspapers might fall off a ferry and sink into the ocean (Hetherington, 1985), or a group of broadcast affiliates might refuse to air a controversial television news special (Carter, 2004), but on balance the process of getting news from the printing press and the broadcast studio to the consuming audience was largely stable and standardized enough to go unnoticed. At the very least, it was sufficiently divorced from the day-to-day activities of journalists to warrant its exclusion from a sociology aimed at understanding their professional activities. That's not true anymore.

With the massive shift to online news that's occurred over the last two decades (Pew Project, 2011) the process of delivering content to audiences has become an integral part of news work, from search engine optimization of headlines and stories (Riley & Usher, 2010) to the maintenance of social media accounts for sharing out links and headlines. What's interesting is that media sociologists, while acknowledging these shifts, have mainly continued to ponder them in terms of traditional categories. Scholars have asked questions about how news organizations' entry into an online information ecosystem might affect news production (Boczkowski, 2004, 2010; Lowrey, 2006; Mitchelstein & Boczkowski, 2009; Paterson & Domingo, 2008; Singer, 2010), as well as about whether the customization provided by Internet technologies might change the nature of news consumption habits and audience effects (Negroponte, 1995; Chaffee & Metzger, 2001; Sunstein, 2007; Mitchelstein & Boczkowski, 2010). As a result of these traditional foci, research on news has somewhat awkwardly gone about simultaneously

recognizing the dramatic impacts of new distribution channels on traditional industries without focusing on distribution itself.¹

A major goal of this dissertation is to step outside the inertial, production-focused categories of the journalism studies literature and to focus on online distribution mechanics and practices. It's important to state outright that, in an environment where a social network account is simultaneously a distribution channel, a marketing tool, a center for public relations, and an editorial product, attempting to draw a hard line between distribution and production would be quixotic and misguided. Indeed, the blurring of these cultural categories is what makes contemporary media so interesting to study. My goal is not to create, preserve, or defend such boundaries, but simply to move the magnifying glass over a few inches so that, rather than looking at distribution only insofar as it impacts production, I will be examining production only insofar as it impacts distribution.

In embracing this shift, I will frequently rely less on the sociology of news than on the sociology of socio-technical systems. While journalism studies has remained production-focused, the latter has developed a sophisticated lens on how products are made to move. Historians and sociologists of socio-technical systems have looked at, among other things, the construction of power distribution networks (Hughes, 1979, 1983), shipping routes (Law, 1986, 1987), railway systems (Law & Mol, 2002), public transit lines (Bugos, 2000), freeway systems, and digital packet routing (Hughes, 1998). To be sure, these are not all, or even primarily news or information products, and as media economists are quick to point out, information is a unique

¹ A few doctoral dissertations in journalism studies have very recently begun to touch on news distribution. C.W. Anderson (2009) focuses on the various Web production environments that make up Philadelphia's news sphere, and in doing so documents a number of distribution activities. Nikki Usher (forthcoming in 2011) has examined organizational change at various news outlets and looked in part at how the demands of new distribution platforms have affected editorial decision making.

commodity (Benkler, 2006; Hess & Ostrom, 2003). I will deal with such differences where I come to them, acknowledging that both differences and similarities between different sorts of systems can be equally revealing.

A second reason for shifting my analytical lens to the realm of the sociology of socio-technical systems is that a great deal of contemporary journalism studies literature about online news has criticized traditional news organizations for failing to change with the times. There is now an established body of work on the reticence of legacy media organizations over the past two decades to adopt new technologies and business models. But, as Dwyer (2010) has noted, in the second decade of the Twenty-First Century, “traditional media have evolved to the point where online platforms are now integrated and necessary components of their businesses” (p. 52). If version one of this research has emphasized legacy media organizations’ “reticence to adopt” Internet technologies and practices, a focus on systems sociology appropriately reframes the issue as “the challenges of embracing” new technologies and practices. This is particularly true of the framework of heterogeneous engineering (Law, 1987, 2002), which opens our eyes to the incredible diversity of resources that are necessary to create a new, reliable socio-technical system like a distribution route or a social publishing platform. Ultimately, then, while this dissertation at times draws from—and hopefully contributes to—the field of journalism studies, it is ultimately about networked distribution systems and how they are forged. My hope is that, taken this way, it will have the potential to contribute to our understanding of how it is that a great diversity of media products make their way to the screens sitting atop our desks, gracing our living rooms, and tucked in our pockets.

Online Television News Distribution

In *Digitizing the News*, Boczkowski (2004) wrote about the efforts of print news organizations to develop their initial online presence. Seven years later, the print news industry has been digitized. Or, rather, the part that hasn't is rapidly disappearing. The Pew Project for Excellence in Journalism (2010) estimates that in the last decade, American newspapers have lost roughly 30% or \$1.6 billion in annual reporting and editing capacity. National news magazines, like Time and Newsweek, have also lost substantial resources (Pew Project, 2010). While the economic recession greatly accelerated the decline in the organizational resources of news outlets, the larger story has been a shift by audiences to online news consumption (Pew Project, 2010). The resulting pressure to monetize online distribution has led to what Usher and Riley (2010) have referred to as a “transform or die” mantra at many news organizations with regard to digitization and adoption of new media technologies.

Television has not been exempt from American journalism's revenue crisis. Network television news has lost over half of its reporting resources since the 1980s, with some of the largest losses coming in the last year alone (Gold, 2010a, 2010b; Stelter, 2010a), while local news divisions have suffered as well (Pew Project, 2010). Among the major American “legacy” news media, only cable channels have avoided this major drop-off in revenue or resources in the wake of the recession (Pew Project, 2010). However, as broadband penetration in the U.S. has increased and more distribution channels for television programming have opened up online, providing potential avenues for consumers to bypass traditional cable and broadcast delivery mechanisms, the economic future of television as a whole and cable in particular has entered a

period of uncertainty and speculation, much as the world of print journalism did a decade ago (Lotz, 2007; Glaser, 2010).

Meanwhile, the economic future of journalism more broadly remains in such flux that journalism professor Jay Rosen (2011) recently declared, “A common mistake in seeking out the next business model for news is to begin by positing that such a model exists within the known universe.” In short, journalism, television, cable, and—to add a wrinkle—the Internet itself are all evolving in rapid and often uncertain ways. And at the nexus of these volatile industries is a small, but growing group of individuals whose job it is to develop and maintain online distribution channels for what is still understood to be television news programming. Their work, and the tensions surrounding it provide a fulcrum from which to pry analytically in new ways at some of the largest shifts within our media landscape.

After an initial pilot study conducted in 2009, in which I interviewed a small number of Web producers, developers, and executives responsible for the online presence of each of the three major broadcast networks’ news divisions, I combed through my transcripts and notes for potential field sites for this dissertation. In keeping with the above observation that a forward-looking manuscript should be about the challenges of embracing new media within legacy news organizations, rather than their reticence to adopt them, I searched in particular for groups that were pursuing online distribution aggressively. The field sites I ultimately chose were Newsvine in Seattle and the offices of MSNBC.com and The Rachel Maddow Show in New York City.²

² In recent years, MSNBC and MSNBC.com have stylized their monikers using lowercasing—i.e., “msnbc” and “msnbc.com.” Because I discuss the organizations over time, I will use the original capitalized lettering throughout this manuscript.

Newsvine

One aspect of taking a sociology of socio-technical systems approach to online television news distribution is that we'll discover essential players who may initially appear to have little to do with either television or news. By this I don't simply mean the entry of large online media companies like Yahoo!, Google, and AOL into the arena of television distribution (Lotz, 2007). Nexidia, for instance, is a software firm that produces applications to make audio recordings searchable by keyword. Its clients include intelligence gathering operations interested in data-mining phone conversations, but on closer inspection it also makes money from television networks looking to search-optimize online video.

Newsvine is another company that most people don't immediately associate with television. The majority of people know it, if they know it at all, as a niche social media Website targeted at citizen journalists and news junkies. And this is not an inaccurate description of their Website, Newsvine.com. In 2007, however, MSNBC.com acquired the tiny six-person startup behind the Website, and Newsvine developers have since turned the original software running their social network into a Web application that powers the blogs/homepages used by the majority of MSNBC's primetime television programs, as well as other blogs, social features, and sharing mechanisms across MSNBC.com. In 2010, at the time I conducted this study, Newsvine had become a major contender to develop a new standalone Website for the MSNBC cable news channel.

The Rachel Maddow Show / MSNBC.com New York

The Rachel Maddow Show (TRMS) is widely regarded in the industry as one of the great success stories of television news programming on the Web, consistently topping popular online audience metrics. Experian Hitwise, which measures traffic to mainstream media sites, consistently shows Maddow's site as being among the top three sites among cable news programs (Cohen, 2011a; 2011b). Its audience consumes more online video than any other at MSNBC TV (Plessner, 2011e), and Maddow herself boasts the most followers—well over 1.8 million—of any television journalist on Twitter (“Social TV Leaderboard,” 2011). The show's online presence includes active accounts on numerous social media sites, including Flickr, Vimeo, Facebook, and numerous accounts on Twitter. And while TRMS' Web presence centers around a (Newsvine-powered) blog, it also makes selective use of other participatory Web tools, including the social timeline generator, Dipity, a quotes page on WikiQuote, and a check-in account on the social television site, GetGlue. The show's MSNBC.com Web producer, Will Femia, is the first employee from his unit within MSNBC.com to be assigned exclusively to developing the Web presence of a single show.³ At the same time, TRMS has hired several of its own producers on the basis of their Web skills, and the first of these, Laura Conaway, also marked the first time in MSNBC's history that a show had diverted part of its television budget to hire an internal Web producer, rather than relying solely on MSNBC.com.

Since “The Maddow Blog” launched in early 2010, TRMS has not only explicitly turned numerous blog posts into television pieces, giving its Web presence a level of exposure still

³ This claim, which originates with MSNBC.com staff, is slightly overstated as Femia's duties continue to overlap onto other shows. But it is unequivocally true that his duties center around a single show to a greater extent than any other MSNBC.com Web producer assigned to cable.

unusual for television news, it has also taken at least one cross-country reporting trip expressly for the purpose of holding a meet-up for blog readers and developing content for the site. The Maddow Blog and social media accounts have been regarded as successful to the extent that MSNBC.com's newest primetime show, *The Last Word*, copied the program's staff structure, hiring its own internal Web producer, while several MSNBC primetime programs, including *The Last Word* and *The Ed Show*, have also begun using blogs as their homepages. At present, the staffing model and features of TRMS' Web presence are currently being considered as templates for the rest of the cable channel's lineup going forward, especially as it edges closer to possibly launching a standalone Website (Stelter, 2010b).

But if the Maddow Show has provided, by some accounts, a model for MSNBC TV's internal online distribution efforts going forward, much of the work of putting MSNBC and NBC News television content online and getting it in front of Internet audiences is presently done, not by the staffs of shows themselves, but by Web producers assigned to the various programs by MSNBC.com, which for reasons that will become apparent in the next chapter has existed as a separate company from MSNBC TV since 2007. As Anderson (2009) has noted, Web producers have become a fixture of the news industry in recent years. MSNBC.com's team of New York TV-Web Producers are responsible for coordinating with other staff at the Web company's headquarters in Redmond, Washington to put video of all MSNBC and NBC News programming online. They help to maintain the various blogs and social media accounts associated with different MSNBC and NBC News television programs. And they are also responsible for helping to pitch show content to blogs and media critics in hopes of increasing links to and coverage of their shows. Similarly, they pitch the same content to section editors across

MSNBC.com, thus encouraging different portions of the Website to help promote/distribute MSNBC TV products online. They are assisted in these efforts by other MSNBC.com staff in New York, as well as by public relations and marketing staff for the cable channel and NBC News.

Field Study

The primary study for this dissertation consisted of a total of five weeks of interviewing and field observation conducted at Newsvine's headquarters in Seattle and the New York offices of The Rachel Maddow Show and MSNBC.com. Of this time, I spent two weeks, or roughly 80 hours interviewing and observing at Newsvine, and three weeks, or approximately 150 hours interviewing and observing in the New York offices.⁴ In both locations, I wrote extensive field notes on each day's occurrences, took note of the different online activities subjects were engaging in, and "followed along at home" on my own computer and Web browser. At Newsvine I was given a workspace in the middle of the company's small office. In New York, I was similarly given a desk in the middle of the Web offices. Ultimately, however, observing subjects as they work at their computers is not the same sort of observational activity as, say, watching people shovel coal or assemble cars. A Web producer with Microsoft Outlook open could just as easily be writing a letter to her cousin as coordinating by email with marketing staff about a new distribution strategy. With some regularity, however, I was invited to observe over

⁴ Initially, I had planned two weeks at each field site, however owing to the comparatively large size of MSNBC's New York headquarters, and the fact that the two offices I was interested in observing—those of The Rachel Maddow Show and those of the MSNBC.com Web staff—turned out to be physically divided, I was given permission to extend my stay to more adequately cover the different portions of the field site.

someone's shoulder as they engaged in core tasks, such as clipping videos to the Web, managing multiple Twitter accounts, updating blogs, deleting spam user accounts, etc.

In addition, I benefitted greatly from the opportunity to observe subjects as they interacted and made decisions, such as when the MSNBC.com Web producer for The Rachel Maddow Show explained the program's Web activities to a new NBC News public relations staffer, or when the Newsvine developers discussed the launch of a blog for the new MSNBC primetime program, The Last Word. Such instances were enlightening in their own right, but ultimately most helpful when it came to preparing for interviews, as they gave me insight into unexpected or important aspects of subjects' work and the tools they used. This in turn informed my line of questioning and greatly deepened the content of and context for my discussions with sources. Moreover, owing to my access agreement with Microsoft in particular, and the at times sensitive nature of office conversations, I have prioritized interview over observational data here (see Appendix A), though my experiences in the field do make appearances in the text where appropriate, and very much informed my use of interview data in the sense that I was able, however briefly, to compare people's comments against lived experience, and often to go back and ask about perceived differences between the two.

In all, including the pilot study, I conducted a total of 47 semi-structured interviews with 37 individuals about their work, each ranging from fifteen minutes to two hours in length. Because Newsvine provided a much smaller field site, I was able to talk with most of the staff there on multiple occasions, and all of them were incredibly generous with their time. During my stay in New York, I focused my attention on the online operations of The Rachel Maddow Show, but also took the opportunity to interview a number of individuals in the Web offices who

worked on other shows, as well as on other parts of MSNBC.com, so as to be able to draw important comparisons between TRMS and the online distribution efforts of other properties and programs at MSNBC and NBC News. Lastly, I was also able to interview several MSNBC.com executives, including the company's president Charlie Tillinghast, director of multimedia Stokes Young, and East Coast deputy editor Randy Stearns.

There were, of course, some limitations to my fieldwork. My observational activities in New York took place primarily in the MSNBC.com offices where I was hosted by the Maddow program's MSNBC.com Web producer, Will Femia. He generously allowed me to shadow him throughout my time in New York and observe his various duties with regard to the show. On occasion he even stayed late to demonstrate work that he would normally have done at home in the evening. At the same time, while I interviewed many of the staff of The Rachel Maddow Show—including all of those most involved with the Maddow Blog—and was able on multiple occasions to sit in on their editorial meetings and some of their other work, I did not have the same level of access to their day to day activities that I received in the MSNBC.com offices.

To complement my fieldwork, I also read extensively from press releases; trade journals, like *AdWeek* and *Broadcasting & Cable*; industry observer Websites such as Lost Remote, NewTeeVee, and Beet.TV; and profiles of Newsvine, The Maddow Blog, The Rachel Maddow Show, and other MSNBC Web and television properties that had appeared in newspapers and magazines. In particular, trade journalist Andy Plessner's site, Beet.TV proved invaluable, and I have drawn extensively from the hours of in-depth interviews he has filmed with executives at MSNBC.com and elsewhere on the business of online video distribution.

Structure of the Dissertation

In chapter two, I elaborate on the contrast between the focus of traditional media sociology, which paints news providers as a limited cadre of gatekeepers forming a bottleneck in the public discourse, with the present media environment in which legacy media compete for attention with many sources across many platforms. I argue for systems sociology, and in particular Law's framework of *heterogeneous engineering*, as providing excellent conceptual lenses for examining the manner in which MSNBC and other large media organizations are attempting to forge new and reliable distribution channels in this rapidly changing and frequently chaotic environment. I also make substantial use of Burke's (1965) notion of *recalcitrance* to conceptualize how each resource enrolled by these system builders also pushes back on the systems they are constructing, simultaneously extending and altering the trajectory of a project as it moves forward. As a case study, I examine MSNBC's development of an online distribution system for the product people most closely associate with television—video—examining the various tools and actors that have been lashed together to bring television programs to our Web browsers, cell phones, social networks, and Internet-connected televisions, as well the different pressures that make themselves felt on the path content takes to these various endpoints. In tracing out this path, it is revealed that pressures come not just from without, but also from within: MSNBC is not a single, monolithic system builder, but home to many distinct project teams, development groups, and editorial subcultures.

In the third chapter I open up this theme, examining the manner in which classic media sociology, in foregrounding the norms of journalism as a pervasive and remarkable achievement of professional socialization, has tended to privilege structure over the agency of individuals and

distinct groups within large media institutions. More recently, scholars like Deuze (2007) have argued that large contemporary media organizations are much more diverse and non-hierarchical in their structure than has until recently been appreciated. This observation fits well with the trends documented by scholars like Hughes (1998) and Powell (2001), who describe the rise of postmodern systems and firms, respectively, which operate within increasingly flat hierarchies and fluid project-based economies. I explore and build on this notion in detail, examining the manner in which a large media organization like MSNBC is not a singular entity, but in fact made up of myriad system builders with provincial objectives that dovetail in places and conflict in others.

In doing so, I reconceptualize the seemingly stable, structured nature of large media institutions through the notion of *isometric pressure*—the idea that they are actually collections of system builders working toward related, but often distinct goals, whose efforts ultimately balance one another. From this perspective, discrete groups within an organization no longer appear as nodes in the hierarchical org chart of a monolithic system builder, but instead each become system builders in their own right. Whether a show is enrolled in a network's system for selling advertising, or a network is enrolled in a show's system for getting on the air becomes strictly a matter of vantage point. I field test this relativistic notion of systems by examining MSNBC from two distinct, but overlapping vantage points: Newsvine as it enrolls MSNBC.com as a financier to continue the construction of its social network, and The Rachel Maddow Show as it marshals resources to alter and expand its Web presence. In telling these stories, we see how Newsvine's enrollment of MSNBC.com temporarily destabilized aspects of its own social network, necessitating changes to its structure and operation. In like fashion, MSNBC.com's

enrollment of The Rachel Maddow Show and unique online strategy temporarily destabilized the Web company's system for putting show content online, resulting in important changes to the way MSNBC.com handles television-related content.

Through these examples, I hope to accomplish two things. First, I hammer out a construct of *local teleology* to describe the manner in which provincial system builders try to unfold their parochial vision of an ideal Web presence or distribution strategy—a teleology that inevitably ends up bearing the impression of the different actors that get enrolled in its service. Second, in reconceptualizing large media organizations as collections of overlapping systems, I paint a picture that bears more than a little resemblance to the world of overlapping systems that, in the preceding chapter, had been conceptualized as being external to the organization. I argue, in turn, that the organizational boundary itself, dividing elements considered internal and external, is largely a construction—another resource developed by actors to do work, which like all other resources has its own recalcitrant aspects. The world of digital distribution, then, takes place along a marked but unbroken fabric of overlapping, interacting distribution systems that are constantly being unfolded.

In the fourth chapter, I examine the conversation economy from a theoretical perspective, drawing from Gaye Tuchman's prescient 1978 book *Making News*, which encouraged scholars to treat the sociology of news as the sociology of knowledge, and examined how newsrooms developed systems for gathering information and standards for valuing it. This proposition has been carried forward and developed, not so much in the sociology of news, but rather in the sociology of knowledge within science and technology studies. In particular, Knorr Cetina's framework of epistemic cultures suggests that our society is shot through with different systems

of knowledge that are similar in their operational principles, if not in their provincial values, to the news frame outlined by Tuchman. While Tuchman's and Knorr Cetina's frameworks are developed in relation to various forms of professional socialization, they demonstrate that knowledge objects—from news stories to scientific findings—are also products of and resources to be used in heterogeneous engineering. I consider what it means to think of audiences as heterogeneous engineers pulling together, and in the process redistributing, media products as resources to achieve their own ends. I propose looking at online distribution as the interaction of myriad individuals engaged in such activities, who selectively move news and information based on whether it fits their provincial needs.

I go on to examine in detail trends I observed at MSNBC.com for capitalizing on this environment. In doing so, I find an ongoing proliferation of brands and niche editorial products aimed at providing resources for a broad diversity of audiences-cum-heterogeneous engineers. I explore how this trend toward niche targeting has created opportunities for some provincial system builders and proved potentially problematic for others. I also find that this rapid proliferation of highly targeted editorial products is increasingly being underwritten by the construction of ever more generic and repurpose-able software architectures, and I similarly explore how this trend creates opportunities and problems for various heterogeneous engineers surrounding MSNBC. I examine how these two cross-cutting trends, which require a high level of coordination between various system builders, can occur within the non-hierarchical environment laid out in the previous two chapters. I look at the relationship of the online trends I've described—which together constitute a sort of bid for mass reach without mass media—to the mass television medium that remains, for the moment, at their center. Finally, I conclude the

dissertation by highlighting several of the arguments and themes made in previous chapters, calling attention to their generalizability to cases beyond MSNBC and even beyond television news, and discussing the implications for our media environment, as well as for further study.

chapter two // forging distribution paths

This manuscript isn't about television news, nor is it about online news, though it will require some thinking about both. Rather, it's about putting television news online. It now seems clear to everyone involved in this enterprise that television news programs should have their own Internet presence, just as it seems clear to the folks at Procter & Gamble that your favorite brand of toilet paper should have a Website and a Twitter account. After all, Internet news consumption is skyrocketing at the same time Americans' other news habits appear to be declining drastically (Pew Project, 2011). Dwyer (2010) has noted that, when it comes to news providers' and other legacy media companies' approach to the Internet,

traditional media have evolved to the point where online platforms are now integrated and necessary components of their businesses. This means, for example, that the line between digital broadcasting and the Internet is no longer so clearly demarcated.

Arguably the future of broadcast television is one arena where the social and cultural impact of convergence and digitization on traditional media is most obvious. (p. 52)

Nor is this phenomenon limited to broadcast television. Cable news, a growth industry for the past 12 years, began showing significant audience declines in 2010—the same year online news consumption rose by a further staggering 17 percent (Pew Project, 2011). And while many legacy media companies have traded on their brand recognition and economic clout to become among the largest online destinations (Dwyer, 2010), cable news operations have been among

the most aggressive American news media in building online presences, with all three of the major channels ranking in the top eight news sites in the U.S. traffic-wise.⁵

But what TV news' online presence should entail isn't necessarily transparently obvious. After all, the technology exists to simply deliver traditional television programming online, much as you get now by turning on your TV. In fact, this year survey research showed that the number of American households owning at least one Internet-connected television set has risen to 30% (Leichtman Research Group, 2011).⁶ Should the online experience of television be the same as the "offline" one? If so, why? And if not, what exactly should it be? I raise these questions not as a prescriptive exercise, but rather to underscore the range of possibilities and perspectives possible on the issue, and to indicate that the choices that are made and the possibilities that seem appropriate are consequential. Unlike other forms of online content, which may draw their identity partly from the Internet medium, putting television online is in effect producing online content for a product thus far defined by an altogether different medium. In this section, I take a look at some of the forces shaping the way television news is distributed on the Internet.

A few days before Thanksgiving in 2009, I paid my first visit as a researcher to 30 Rockefeller Center, Manhattan's towering General Electric building that is home to the headquarters of NBC News and its cable cousin MSNBC. I was greeted by Will Femia, who had been an online producer there for as long as many people could remember. During our conversation, he reminisced, "One of the things that was most shocking to me getting into the

⁵ As ranked in May 2011 by EBizMBA, which combines analytics from Alexa, Compete, and Quantcast.

⁶ This finding comes at the same moment overall ownership of television sets in the U.S. is set to decline for the first time in twenty years (Lawler, 2011), meaning that overall market penetration of connected televisions is outpacing television ownership.

media business was the realization that regular people were making it,” he said. “Television to me—prior to working in television—was just like sunlight. You pushed the button and it just comes off the TV screen.”

Femia’s quote nicely joins two concerns of media sociology. The first is to problematize overly simplistic notions of media production. Indeed, one of the great contributions of media sociology since the 1950s has been to unearth a sense of contingency in the production of news. This is most readily apparent in discussions of the gatekeeping function of the news media. Both scholars and practitioners examining gatekeeping have sought to explain why some issues and events become newsworthy while others remain obscure. Answers have been offered up in the form of classic newsroom ethnographies like “The Gate-keeper” (White, 1950), *Making News* (Tuchman, 1978) and *Deciding What’s News* (Gans, 1980); critical studies of news content such as Stuart Hall’s (1973) “The Determination of News Photographs;” and innumerable lists of news values in the tradition of Galtung and Ruge’s (1965) “The Structure of Foreign News.” This body of research ultimately dispensed with what Gans (1980) called “mirror theory,” the naïve assumption—if it ever existed—that news products represent complete, veridical accounts of reality. Instead, they argued that news is a constructed cultural artifact—a picture of reality resulting from situated values and distributions of resources

And no sooner had it been established that the content of the news media is neither unequivocally, “the way it is,” nor “all the news that’s fit to print,” than the attention of sociologists began quickly to encompass the implications of these findings for social movements and societal change. At first, this project largely demonstrated the manner in which social movements had been marginalized. Tuchman (1978), for instance, documented the various ways

in which the women's movement was ignored, then subsequently maligned and ridiculed by the press before ultimately managing to establish itself as a legitimate voice in the mainstream media. In his own take on the news media's framing practices, Todd Gitlin (2003) famously implicated the mass media as a factor in the eventual dissolution of the 1960s student movement, detailing the ways in which Students for a Democratic Society ultimately lost control over their image to the news media. But as Tuchman and Gitlin both pointed out, despite the potential pitfalls that come with coverage, favorable attention from the news media greatly benefits social movements, and many sociological accounts have focused on how media-savvy interest groups adopt "dramaturgical styles of activism" (Epstein, 1996, p. 220), carefully packaging their claims in ways that are likely to receive (favorable) media attention (Best, 1990; Gamson & Modigliani, 1989; Ryan, 1991). As Hilgartner and Bosk (1988) put it,

[Interest groups] are familiar with the selection principles of public arenas and they deliberately adapt their social problems claims to fit their target environments by packaging their claims in a form that is dramatic, succinct, and employs novel symbols or classical theatrical tropes, or by framing their claims in acceptable rhetoric.

In short, in the sixty years since Lewin (1951) and White (1950) first deemed the news media to be gatekeepers, media sociologists and other scholars of communication have developed a sophisticated language for discussing the various ways in which news organizations form a bottleneck in the public discourse, selectively limiting audiences' access to information, while interest groups tailor their messages to the mass media's whims and attempt to game its various selection mechanisms to bring their concerns to public. Without questioning the validity or extraordinary depth of scholarship that has gone into developing this lens on the news media, in

this chapter I wish to argue that some of the most interesting questions surrounding today's news media lie outside its center of balance.

This brings me to the second concern raised in Femia's description of television content coming "off the screen like sunlight." Online media, like television and other electronic media before them, feel immediate and are often defined by their potential for "liveness" (Gans, 1980; Couldry, 2008). This sense of liveness, or "immediacy," to use Gans' (1980) term, is carefully cultivated and an important part of news media's presentation of itself as a form of direct access to world events. Unlike physical newspapers, and their attendant icons of the paper boy and delivery truck, however, we have little intuitive sense of the route that online news takes to get to us. When we can push a button and watch it come off the screen, it is all too easy to forget that online news is distributed—that systems of labor, infrastructures, institutions, economics, and numerous stakeholders are all involved in the route it takes to that screen (Downey, 2001). Indeed, just what sort of screen news is delivered to—whether it belongs to a television, computer, mobile phone, or tablet—is a matter of huge concern, and increasingly contention, among media producers and distributors (Frommer, 2009; Hedlund, 2009; Plessner, 2010; Lawler, 2011b). Carey (1989) reminds us that we as a culture once associated the spread of information with the physical movement of messengers, before widespread adoption of electronic communication technologies, and the rhetoric of "eclipsing time and transcending space" that accompanied them, ultimately allowed us to largely divorce our notions of "transportation" and "communication." Even as information now follows complex and shifting communication networks, these systems are regularly rendered invisible to the news consumer. In other words, the transport of news and information has been considerably "black-boxed" (Latour, 1987). But

even in the so-called information age, when communication seems so immediate, information must travel a route to reach us—and tracing that path opens up a host of sociologically interesting relationships.

The Conversation Economy

In his 2005 book, *The Search*, John Battelle—a founding editor of *Wired* and former CEO of the defunct Silicon Valley trade journal, *The Industry Standard*—offered up a concept that has since become known amongst the technorati as the “conversation economy.” More and more, he noted, Web users seemed to be accessing news stories not by clicking through the homepages of news outlets, but by way of search engines and their associated news portals, or by following links shared by friends and acquaintances in various forms of online conversation. He argued that such trends put publications like *The Wall Street Journal* and *The Economist* at a disadvantage. These sites, which were built on a subscription model, put their stories behind paywalls, which in turn restricted the ability of search engines to index them, and of friends to share content with non-subscribers. Moreover, the two practices—search and sharing—tend to work synergistically to direct traffic online. The more often the link to a story is shared in blogs, discussion forums, and on social networks, the higher it will rise in the results of search engines that rank pages partly by counting backlinks (Introna & Nissenbaum, 2000), and the more easily it will be found and shared in the future. Battelle predicted that as search and sharing continued to become more prominent methods of access to news, the influence—and subsequently the readership and revenue—of paywalled publications would begin declining apace, while their relatively open counterparts reaped the benefits.

While the paywall experiment isn't over yet for many news sites, some aspects of Battelle's predictions have proved prescient. In particular, it appears that a great deal of traffic to news sites today is directed by sharing and search (Dwyer, 2010; Riley & Usher, 2010). In the first quarter of 2011, MSNBC.com reported that around 10 percent of its video traffic comes from clips embedded on other sites, while ABCNews.com divulged that 70% of its video views are directed through links and search (Plessner, 2011c, 2011d). In March of last year, the Pew Internet and American Life Project (Purcell et al., 2010) revealed link sharing had become an exceedingly common way of spreading and encountering news, reporting that

75% of online news consumers say they get news forwarded through email or posts on social networking sites and 52% say they share links to news with others via those means. 51% of social networking site (e.g. Facebook) users who are also online news consumers say that on a typical day they get news items from people they follow. Another 23% of this cohort follow news organizations or individual journalists on social networking sites.

(p. 4)

Similarly, in 2009 Facebook surpassed Google News in the number of users it directed to news media Websites, and was generating over twice as many clickthroughs to news sites by February 2010 (Hopkins, 2010).⁷

These substantial shifts have not gone unnoticed or unaddressed by journalists and media organizations. There is both anecdotal (Foremski, 2010) and ethnographic (Riley & Usher, 2010) evidence to the effect that online journalists have begun to select story topics partially on the basis of whether an article is likely to generate page views through sharing and search. And

⁷ While Facebook leads Google *News* in the amount of news traffic it directs, it's worth noting that it still lags far behind general interest search engines like Google and Yahoo! (Hopkins, 2010)

companies like Demand Media, at one point estimated by some to be the most lucrative technology startup since Google (Kerner, 2010), have begun commissioning journalists to write stories on subjects suggested by algorithms that comb through search engine queries in pursuit of trending topics likely to generate the most page views. Indeed, metrics like the page view are fast becoming a major force in the editorial cultures of many online publications (Outing, 2005; MacGregor, 2007; Anderson, 2009, 2011; Riley & Usher, 2010). As Dwyer (2010) puts it,

On the Web, news organizations are focusing somewhat less on bringing audiences in and more on pushing content out. The suggestion is that this trend arises from the news industry beginning to more fully understand the viral nature of the Web and the rise of social media. Initially in a few podcasts, RSS feeds and email alerts, the importance of multi-platform distribution including Facebook, Twitter and video-sharing sites like News Corporation and NBC Universal's jointly owned Hulu.com site have been recognized. (p. 50)

Moreover, studies imply that younger media consumers are especially likely to receive news and information through non-traditional channels, leading to suggestions that cohort effects will compound this ongoing shift toward offsite and social distribution as new generations of consumers make up an increasing share of the media market (Dwyer, 2010). In this vein, Avner Ronen, the founder of Boxee, a company that makes a social media-oriented operating system for Internet-connected televisions, has claimed—with more than a bit of melodrama—that the new challenge for distributors is to make “the TV screen relevant for people who had the Internet before they had sex.” (“Technology Visionary,” 2010).

This shift from a hierarchical mass media distribution bottleneck to a conversation economy has become a rallying point and new subject of interest for journalism studies scholars, under the moniker, “network journalism” (Bardoel & Deuze, 2001; Jarvis, 2006; Deuze, 2007; Quandt & Singer, 2009; Anderson, 2010; Singer, 2010). The researchers involved in this arena have come to understand their new sociological task as the examination of how news work is changing in response to the proliferation and variegation of information sources online (Anderson, 2009; Fenton, 2010; Jarvis, 2006; Quandt & Singer, 2009; S.C. Lewis, 2010; Singer, 2010), as well as coming to grips with the evolving relationship between journalists and news consumers (Quandt & Singer, 2009; Singer, 2010). Those researchers who would preserve a traditional concept of gatekeeping in journalism studies are also actively adjusting its theoretical underpinnings to favor an “ecological,” or “network” perspective on the information space in which journalists operate (Barzilai-Nahon, 2008; Shoemaker & Vos, 2010; Shoemaker, Vos, & Reese, 2009). And scholars taking a ‘network journalism perspective’ are increasingly considering whether the potential for interactivity in media production online problematizes the notion of audiences as traditional consumers (J. Rosen, 2006a, 2006b; Deuze, Bruns, & Neuberger, 2007; Anderson, 2011).

A dominant through-line from the classic sociology of news to this contemporary literature on network journalism has been how digital technologies have changed or relocated established routines of news *production*. Singer’s (2010) account of network journalism captures this well:

Journalism is no longer simply about informing or entertaining but also about engaging and interacting with an enormously diverse range of unseen (but not unheard) people.

There are strains as longstanding norms related to the exercise of power and control over content are stretched in new directions and as journalists negotiate what one interviewee called the transition from a professional discourse to a far more personal one. (p. 281)

There is a focus here on interactivity, engagement, and control over content, but all are framed in terms of how they impact the “discourse of journalism”—the products being produced and the norms for producing them. My argument here is that, as scholars begin to examine how interactivity and new patterns of distribution impact news production, a huge contribution remains to be made in the form of deepening our understanding of how online distribution works. An in depth look at distribution practices and concerns can thus greatly contribute to the work network journalism scholars are doing on the evolution of news work by making much more explicit just what the new concerns are that are impressing themselves on news work, and how best to go about studying them.

A production focus is also at the heart of most sociological accounts of television news, including those by Warner (1970), Schlessinger (1978), Gans (1980), Hetherington (1985), Küng-Shankleman (2000), and Hemmingway (2005, 2008). In 1978, Schlessinger wrote that television journalists work “within an organizational structure which has no adequate point of contact with the audience for broadcast news; ... there is, therefore no sense in which one can talk of a communication taking place which is truly alive to the needs of the news audience” (p. 106). But as news has moved online and delivering content to audiences has become an increasingly social enterprise, journalists have also become responsible for “placing [their] product in front of the people who will potentially choose it” (Turow, 1992, pp. 34-35)—in other words, for *distribution*: posting links to their publications on social media accounts, emailing

URLs and promotional materials to prospectively interested bloggers and media critics, and reaching out to potential audiences online. News work, including television news work, is no longer confined to story selection or news gathering and production, but has begun to include an array of responsibilities once outsourced to printers, broadcast affiliates, and cable providers, chipping away at the distinction between content creation and distribution. We're likewise witnessing the introduction of new distribution players, from television producers to technology startups to Facebook users, both inside and outside of traditional media organizations.

In short, while media sociologists have long focused on the ongoing issue of how non-journalists package their stories for propagation by the news media, increasingly the news media must also package its stories for propagation by non-journalists. The new task, then, is to develop a theoretical lens for looking at how journalistic accounts are made to circulate in this new and extended information network. There are no magic bullets for journalists, of course. Communication research has long suggested that the producers of messages can seldom guarantee their impact or popularity (Bauer, 1971). In the words of sociologists of another tradition, online news circulates within an "agonistic field" (Latour & Woolgar, 1986), relying for its propagation on actors with their own distinct motives and prejudices. But, as the Latour and Woolgar reference suggests, there are certainly theoretical lenses that can help us understand how journalistic practices are adapting to the digital environment.

Toward a Theoretical Framework for Digital Distribution

In practice, if not in name, the concept of the "conversation economy" is alive and well in the world of online television news distribution (Dwyer, 2010). American TV news outlets are

well along into the world of social media and off-site content distribution, as evidenced by the proliferation on all the national television news sites of share buttons, embeddable video players, RSS feeds, and social media accounts, which at first blush seem aimed at spreading content around the Web as far as possible. But relying on users to share content also means loosening one's control of the distribution chain. And in the absence of traditional controls on distribution, media companies are introducing other mechanisms for steering their content online. This is especially evident if we look beyond news to entertainment television programming, where the content industries have been urgently trying to manage the movement and use of their content as it travels across the network, out of their hands. Studios and networks that offer up TV shows online are using digital rights management (DRM) technologies to build copy restrictions into media files and place limits on how far their content can spread ("iTunes Store," 2009), geofencing (blocking international IPs from accessing content) to enforce national copyright boundaries on the Web (Kerbel, 2008), authentication to make sure that online viewers are offline cable subscribers (Albrecht, 2009a, 2009b; Lawler, 2011c; Plessner, 2011b), domain blacklisting to ensure that their content isn't embedded on lewd sites or used to build unauthorized mirrors (Albrecht, 2008, 2009c), IP blocking to keep particular users or institutions from accessing or sharing content, and user-agent banning to control what software and devices people use to access content (Dybwad, 2010; Stevens, 2010). In the absence of a fixed route to the consumer, the networks place a share button here, a domain restriction there, and so forth, hoping that like bumpers on a bowling lane, these will guide their content in a generally desirable direction. It's a lot to keep track of, but luckily large assemblages of technological

actors like these point to a useful conceptual framework for getting a handle on digital television distribution in general, and online TV news distribution in particular.

Celebrating the Kludge

In Ron Howard's film, *Apollo 13*, NASA engineers at mission control are charged with figuring out a way to repair the imperiled astronauts' life support system using only objects available aboard the spacecraft. More specifically, they famously need to fit a square peg into a round hole to connect two pieces of equipment that otherwise wouldn't work together. Each one of the available items aboard the spacecraft, with which the engineers intend to conduct the repair, is what you might call *recalcitrant* (Burke, 1965), helping to solve one problem, but often creating another, which has to be solved by adding yet another item, which in turn creates another issue, and so on. Burke (1965) paints working with recalcitrant objects like these as a dialogical process, whereby the world pushes back on our raw intentions, forcing us to iteratively temper them into a viable strategy. As he puts it, "the recalcitrance of your material discovered *en route* may eventually compel you to revise" your plans (p. 258). More than simply "solving one problem while creating another," recalcitrance, in other words, is a way of looking at agency, material and otherwise—the stubborn unwillingness of parts to bend to fit the need at hand. It's the idea that things never entirely give up their shape. In the film, the end result is an unholy looking assemblage of bungee cords, duct tape, socks, and plastic bags that are individually troublesome, but together solve more problems than they create.

On a larger scale, Law (1987) called this process of fitting together recalcitrant actors into a working assemblage *heterogeneous engineering*. But in his view to focus strictly on the

gadgetry involved in such enterprises is inevitably misleading. People and corporations are frequently in the position of having to engineer solutions to their problems with recalcitrant tools, but when the introduction of a gadget to the emerging solution creates a new problem, it's frequently patched not with another gadget, but with a lawyer, a merger, a marketing campaign, an employee training program, a new pricing scheme, and so on and so forth (Hughes, 1987, 1998; Law, 1987). Like technological implements, these bits and pieces are also recalcitrant and the problems they create may be solved with another gadget or another lawyer, etc. This is the “heterogeneous” aspect of heterogeneous engineering—technology is only one sort of tool amid the various legal, social, scientific, and economic implements that get lashed together into a working system like, say, an online television distribution strategy. That the result looks complicated, then, is no surprise—there are no solutions, save for those full of socks and duct tape.

This is an important insight in that many of the most interesting scholars on the subject of the politics of technology focus on its obduracy. In driving home the point that artifacts have politics and design has implications, they look at how artifacts often stick around in such a way that we must live with the consequences of design (Introna & Nissenbaum, 2000; Latour, 2002; Bijker, 2006; Lessig, 2006; Flanagan, Howe, & Nissenbaum, 2008). This is true, to a point, even of Hughes (1979), from whom Law draws much of his inspiration in thinking about social/

technological systems. Hughes' (1979, 1987, 1998, 2004) conceptualization of systems⁸ is compelling as a basis for a concept of heterogeneous engineering in that he demonstrates both the diversity of the resources involved in technological design and deployment, as well as the manner in which contemporary system builders came to appreciate and strategize around this complexity, particularly over the course of the Twentieth Century:

[Engineers] and other professionals influenced by them increasingly conceptualized the world around them in terms of systems. Formerly, they might have seen an airplane in isolation. Now they saw it as part of a system involving airfields, air controllers, fuel depots, and maintenance facilities. Formerly they might have conceived of a highway in isolation; now they placed it in a network of facilities, including automobiles, service stations, and traffic controls. (Hughes, 1998, pp. 82-83)

But Hughes, Law contends, imagines that while there may be thorny problems—so-called *reverse salients* (Hughes, 1987)—that require the focus and attention of system builders from many different angles, once these problems get solved a system will largely be built

⁸ It's worth noting that in his various works, Hughes uses the notion of "system" in at least three different, if related, ways. One is an actor category from a very specific historical moment—the development of formal disciplines of systems engineering, operations research, and systems analysis. Another use is to suggest a management strategy strongly influenced by that historical moment—"systems thinking" in a broad variety of organizational contexts not limited to those taking a formal systems-engineering approach. And finally, he also uses "system" as an academic construct that can refer to contemporary system builders, but also individuals like Bell, Sperry, or Edison, who historically predated the disciplinary notion of systems engineering, but engaged in similar enterprises. It is this last capacity that I will tend to use the notion of system, though I accept Hughes' (1998, 2004) contention that formal notions of systems engineering have had an influence on the organizational forms adopted by Internet companies.

according to plan. Moreover, once constructed, Hughes contends systems have obduracy—that tendency to stay built.⁹

Turow's (1992) power role theory of media also takes a clever systems approach—painting the various organizations involved in media production and distribution as system builders competing to assemble resources and leverage in a hostile environment—but similarly comes away with a sense of obduracy, illustrating how the roles, resources, and practices of different media industries become firmly structured over time. For Law (1987), assumptions of obduracy can be misleading. Rather, he emphasizes the conflict and entropy that are inherent in the networks of alliances necessary to build a social and technological system that does what a builder wants. Rather than viewing the world as inherently stable, heterogeneous engineering is a perspective that views social/technological systems as constantly coming apart at the seams and emphasizes the great labor involved in merely keeping things the same. Law's perspective can be read as a celebration of the stopgap and of the kludge, uniquely suited to an examination of our fluid digital culture. Like the Red Queen in *Alice and Wonderland*, the heterogeneous engineer is running as fast as she can just to stay in the same place.

Moreover, when it comes to distributing television online, what looks like a solution to Apple or Cablevision may be anathema to Google, Warner Brothers, or CBS. Solutions are difficult, and the heterogeneous tools themselves are recalcitrant, in part because many parties

⁹ It's important to note that this view of his work, which Law puts forward, comes from a specific moment in Hughes' scholarship. Hughes (1998) went on to chronicle shifts in the nature of technological systems, concluding that in the last half of the Twentieth Century, system building took on a distinctly postmodern style, exemplified by an embrace of discontinuity and a shifting "commitment by industry to change-generating projects rather than to long-lived processes" (p. 5). Moreover, he suggests that this movement has been lead and most strongly exemplified by professionals in the computer and Internet industries (Hughes, 1998, 2004), calling it a shift to an "information-revolution organizational style" (Hughes, 2004, pp. 101-102). Many passages in his later work are in fact very consonant with Law's notion of precariousness and continual change. We'll revisit Hughes and his notion of postmodern systems more extensively in the next chapter.

are working simultaneously against one another to construct a system that advantages them at the expense of others. A given engineer seeks to make other engineers subject to her own interests, and to summon a particular configuration of the available bits and pieces, be they human, technological, legal, commercial, or otherwise, optimized for her own purposes—a process Callon (1986) refers to as *enrollment*. It is precisely the fact that numerous actors are at once playing this game at cross purposes that places limits on the malleability of the available resources.

Threading Needles

In fact, scholars like Hughes and Law offer us the beginnings of a sociology of distribution. In *Rescuing Prometheus*, for instance, Hughes (1998) roughly divides the tasks with which system builders concern themselves into four sorts—production, transportation, communication, and energy. Three of these—transportation, communication, and energy—involve a form of distribution, whether it involves information, objects, or electrical power. And as we’ve seen, the last, “production,” is increasingly intermingled with distribution in the world of online news. While recognizing that production and distribution—and indeed many of the other roles described by Turow (1992) as constitutive of media industries, such as linking and facilitation,¹⁰ are intermingled in contemporary news work, in what follows, and across this manuscript more generally, I have chosen to focus on the element of distribution. I do this, first, because as indicated above, news distribution is relatively understudied from a sociological standpoint, and second because distribution is, in general, a new element to journalists’ work

¹⁰ Turow (1992) defines linking, or the “linking pin” role, as cross-promotion of content across media and facilitation as a collection of roles, such as market research, that help enable media production.

routines. Moreover, while I draw from the various notions of systems put forward by scholars like Hughes and Turow, I will also, in the following pages, give special attention to Law's notion of heterogeneous engineering. I have done so for three reasons. First, while I have no issue with the focus of scholars like Hughes and Turow on the obduracy of social/technological systems, Law's focus on entropy and precariousness makes heterogeneous engineering ideally suited for studying moments of change and upheaval, such as that which is currently being experienced by both the television and news industries. Second, like other actor network theorists, Law emphasizes that roles and patterns of forces are to be discovered through study, rather than prescribed in advance, providing a valuable lens for studying a population whose work routines are changing and expanding to encompass and draw together new roles and responsibilities (Anderson, 2009). Such a perspective is also in stark contrast to much of the extant journalism studies literature, which has over the years developed fine-scale definitions of what editors, anchors, producers, and correspondents do, which are likely to cause trouble when applied *a priori* to a rapidly changing media environment. Lastly, for the aforementioned reasons I believe heterogeneous engineering has the potential to be especially valuable to contemporary media sociology, and while it has received honorable mention in other works (see, for example, Gillespie, 2007 and Anderson, 2009), I would like to elevate and develop it here into a more fully fleshed out lens on media practices, particularly where distribution is concerned.

Heterogeneous engineering conceives of the world as full of systems, competing to draw various actors into stable networks that accomplish the objectives of their respective system builders. According to Law (1987), this is frequently a zero-sum game, in which the successful *association* of one network results in the *dissociation* (i.e., breakdown or dissolution) of others.

In other words, Law (1987) foregrounds the challenges of competition and of entropy in assembling stable social/technological systems. Thinking in terms of heterogeneous engineering, a system is never a done deal, never complete—at any given moment it is only more or less stable. I accept these insights, with the proviso that, rather than thinking in terms of association and dissociation, I prefer to substitute Burke's (1965) concept of recalcitrance—rather than simply dismantling one another, networks that rub up against each other more often cause competing or enrolled system builders to alter their strategies, and the resources with which they pursue them.

In either case, the advantage of heterogeneous engineering as a framework, with its emphasis on both entropy and heterogeneity, is it foregrounds the fact that the construction and maintenance of particular social and technological arrangements is not a one-time enterprise, but a continual, dialogical process, in which the challenges to be examined are not stable or exclusively social phenomena, as sociologists have at times assumed. Rather, as I indicate above, in each unique system we examine, the goal “is to *discover* the pattern of forces as these are revealed in the collisions that occur between different types of element, some social and some otherwise” (Law, 1987, p. 114; emphasis original).

The case Law (1987) initially described in laying out his notion of heterogeneous engineering was that of the *volta*, a portion of the Portuguese trade route to India that required centuries' worth of economic, legal, social, scientific, and technical engineering. The construction of the *volta* required the enrollment of numerous recalcitrant agents that simultaneously served as resources and shaping forces for the system builders. The winds and currents that helped to carry ships to their destination immensely complicated their return. The

celestial charts created in response by astronomers enabled creative navigational solutions to these problems, but were illegible to semi-literate sailors, the training of whom put further stresses on the system. When, finally, all these things were in place, their influence was quite literally inscribed on the map:

The *volta* can thus be seen as a geographical expression of a struggle between heterogeneous bits and pieces assembled by the Portuguese system builders and their adversaries, that is, the winds, the currents, and the capes. It traces on a map the solution available to the Portuguese. It depicts what the Portuguese were able to impose on the dissociating forces of the ocean with the forces they had available. (Law, 1987, p. 120)

The Portuguese were largely interested in acquiring and distributing trade goods, rather than news, but there is a universal point here. Again, it's easy to forget that online news and information are *distributed*. But while there are differences between information and physical objects (Benkler, 2006; Hess & Ostrom, 2003), between the Portuguese' desire to accumulate goods and the need of contemporary media workers to push information across services and devices, both trade goods and news items travel a route to get from one place to another. In both cases the path they take is itself a middle course reflecting the interests and limitations of myriad heterogeneous systems and actors. Portuguese ships traveling the *volta* threaded a needle between an inhospitable desert coast on one side, and unfavorable winds and currents on the other. And their route was equally influenced and displaced by the interests and limited malleability of sailors and royalty, navigational astronomers and shipwrights, at each turn taking advantage of opportunities these agents provided while similarly threading a needle between the limits imposed by all of them. I want to think of digital distribution in much the same way, as an

“inscription on the map of the solutions available” to content providers, illuminating the manner in which the route news and information takes to our screens is at once the result of heterogeneous resources (at times precariously) lashed together, and the threading of needles— weaving between the limits imposed by all these resources and those enrolled in competing systems.

Again, gadgetry provides examples that are among the simplest for illustrating how such compromises get traced out in the route information takes. If you’ve ever signed up for a Yahoo! Mail account to export your address book from Facebook, just so you could subsequently import it into Gmail or Outlook; or if you’ve sent a document through eight pieces of software to convert it to the filetype you want or load it onto your phone, you begin to get a sense of this. That path between multiple applications that talk to one another only selectively, or attempt to preempt you from moving your data, is in fact full of “traces of associations” (Plesner, 2009)—it is the signature left by others’ engineering of economic, legal, social, and technical arrangements, which you—yourself a heterogeneous engineer—are now working with and against. Again, too, the above examples privilege technological strategies for manipulating the path of content. As I explore the case of MSNBC, I’ll begin to further discuss and iterate on various social, economic and other heterogeneous forms of engineering.

Technologies as Heterogeneous Artifacts

For the moment, I’d like to point out that technology is itself a manifestation of heterogeneous forces (Hughes, 1987, 1998, 2004; Law, 1987, 1992, 2002). Children with active imaginations will watch some miracle of automation, like a mechanized pinsetter and ball return at the bowling alley, and substitute creative images of what’s going on behind the scenes—an

army of gnomes springing into action to right the pins and run your ball back to the carousel. In a less fantastical sense, this is not far from someone like Hutchins' (1995, 2003) conception of automation. But rather than discussing fanciful causalities we might assign to technical artifacts, Hutchins instead refers to the heterogenous skills, knowledge, and actions that become imbricated into our technologies such that they appear to function magically. In examining how information is summoned, transferred, and stored in work settings, from naval bridges (Hutchins, 1995) to airline cockpits (Hutchins & Klausen, 2000; Hutchins, 2003), he documents how people seamlessly offload information to the built environment around them and outsource mental labor, like sorting, monitoring, or numerical calculation, to machines. But where such automation is concerned, Hutchins looks beyond the gadgetry to its architects. For him, asking a computer to run an algorithm is not abdicating human decision making, but rather is in fact the summoning of all the human labor and decision making that went into creating that algorithm. Each time you add a column of numbers in a spreadsheet application, it's as though dozens of software developers, product managers, and interface designers spring into action behind the scenes, like so many gnomes arranging bowling pins, to come up with a sum and present it to you in a beautiful Calibri system font. Similarly, Hughes (2004) emphasizes the manner in which our technologies are no longer simply responses to or means of manipulating the natural environment, but are increasingly responses to and means of manipulating a world that is already "human-built," shaped in part by nature, but equally by existing technological infrastructure and layers of legal, economic, and organizational practices. Where such shaping of action through infrastructure is intentional, it is what Turow (1992) refers to as an exercise of *structural power*. Scholars like Pfaffenberger (1992) or Introna and Nissenbaum (2000) suggest such a way of

thinking highlights the manner in which the various political, scientific, legal, technical, and economic arrangements that went into the initial construction of a tool are constantly replayed, compounded, and reified each time it is used, or conversely challenged each time it is circumvented or appropriated for an unanticipated use. Consider users who found a way to watch TV shows from Hulu using Boxee's home entertainment software while the latter was banned from the service (Purdy, 2009), "jumped" the New York Times paywall using one of the various workarounds published by angry consumers (Garber, 2011), or watch pirated streams of live sports online rather than paying for cable (Ernesto, 2009; Kravets, 2011; Sandoval, 2011). This sort of constant realignment and tug of war between those who would regulate through a technological system and those who would use or configure it differently (or abandon it altogether) is what Pfaffenberger (1992) calls a "technological drama," emphasizing both the political and dialogical aspects of technological use and development. Such a characterization helps us to understand the deployment of technologies on the one hand, and their circumvention or appropriation by users on the other, as forms of public discourse in their own right—acts which are equal parts technical and symbolic, containing within them claims about who should have access to information and on what terms.

Heterogeneous engineering and tugs-of-war are all around us in the world of online television news distribution, and we can see the influence of competing systems traced out on the map. Dwyer (2010) underscores the complexity of such an enterprise, noting for instance that involving audiences in the production and distribution of content

is not simply a matter of hitting on the best 'business model': there are many interrelated factors which render this moving target problematic. It's a complex new juggling act, on

the one hand, to shape, direct and maintain these vast audience aggregations and to have them working towards a profitable bottom line, while on the other, not to annoy or provoke audience resistance: to interfere with the utility and pleasurable engagements that sites like MySpace offer audiences would be to undermine their popularity. (p. 54)

The Example of Time Delay

Time delay is a powerful example of how online video's route is impacted by the various forces and architects in play in online and social television news distribution. On the one hand, audiences will rarely see a live stream of a national TV news broadcast on the Web. This is because the owners of the corresponding news divisions still make considerably more selling their programming to cable providers, who pay a retransmission fee to carry even "freely" broadcast over-the-air news shows. As Charles Tillinghast, the president of MSNBC.com, put it in an interview: "The MSOs [Multiple System Operators, a.k.a. cable companies] aren't too keen on having channels that they pay fees to run appear on the Website for free." The news divisions at the networks, then are beholden to their corporate parents, who in turn don't want to anger cable providers by giving away content free online for which cable subscribers would otherwise have to pay.¹¹

On the other hand, you'll often see the entirety of these same shows posted for free to the Web as little as ten minutes after they air. This is because when they're not available from the source, popular news clips quickly get bootlegged to YouTube and other video sharing sites. During my time at MSNBC in New York, Will Femia noted the importance of "getting it out first." If a television outfit doesn't upload its own embeddable clip to the Web as quickly as

¹¹ When MSNBC.com does provide a live stream of television news coverage, it almost invariably comes from the broadcast news division, rather than from the MSNBC cable channel to avoid cutting too deeply into the MSOs' bread and butter.

possible, much of the online traffic will go to unofficial copies of a segment, rather than to the news provider. This was in fact a large part of the reason MSNBC.com developed and released its embeddable player in the first place (Plessner, 2008b). When embeddable clips *are* available to users, embeds make up a significant portion of MSNBC.com's video traffic—as high as 10 percent (Plessner, 2011c).

There are thus competing legal and economic forces that determine when video of television news goes online—it cannot be posted live, or it will ruin lucrative cable distribution contracts, but it should be as close to live as possible or it will conversely ruin the online revenue stream. And so online distribution of television news clips neatly *threads a needle* between the recalcitrant interests of the cable companies on the one hand and the recalcitrant interests of Web users on the other. Both parties can be valuable resources lashed together by the news providers to create a profitable operation, but neither is so agreeable that it lets the provider do whatever it wants.

In the remainder of the chapter, I turn to the larger case of MSNBC cable news and MSNBC.com to provide a more comprehensive example of how distribution can be understood as heterogeneous engineering, as well as lay the groundwork for further discussion.

Heterogeneous Distribution at MSNBC TV and MSNBC.com

To convey an idea of the distribution system that's being constructed at MSNBC for online television news, I'll trace out the path taken by a typical cable news program on its way to an online audience, introducing the various actors, technologies, and organizational components enrolled in—and pushing back on—this system along the way. It's worth noting that tracing out

a *volta*, as it were, for news content is an approach that borrows from actor-network methodologies, purposively defying conventional levels of analysis. This is not an individual, group, or even organizational exploration in a traditional sense, nor one that attempts to privilege either the social institutions or the technologies in play, but rather one structured around unpacking the various elements—whatever form they take—impacting the route television news takes to us online. This is what Law (1987) was referring to in saying we should seek to “discover the pattern of forces” relevant to the system, rather than attempting to outline them in advance (p. 114).

With that said, unlike some other studies that take methodological or theoretical inspiration from actor-network theory, I do not wish to paint this enterprise as an oppositional sociology bent on upending traditional sociological accounts of technology or media. Rather, I have selected this approach because of what, as I argue above, I perceive to be its unique fit with some of the most interesting questions surrounding the contemporary reshaping of television and news.

Flipping Video

The online presence of MSNBC cable news programs isn’t limited to what’s also aired on television, nor even to video content. However, as we’ve already seen, making shows available online in a timely fashion after they air is an important concern for television news organizations, so the process by which this occurs is a good place to begin our discussion. Figure 2.1 shows how this process generally happens at MSNBC. First a Web producer based in New York and affiliated with MSNBC.com watches the television program as it airs.

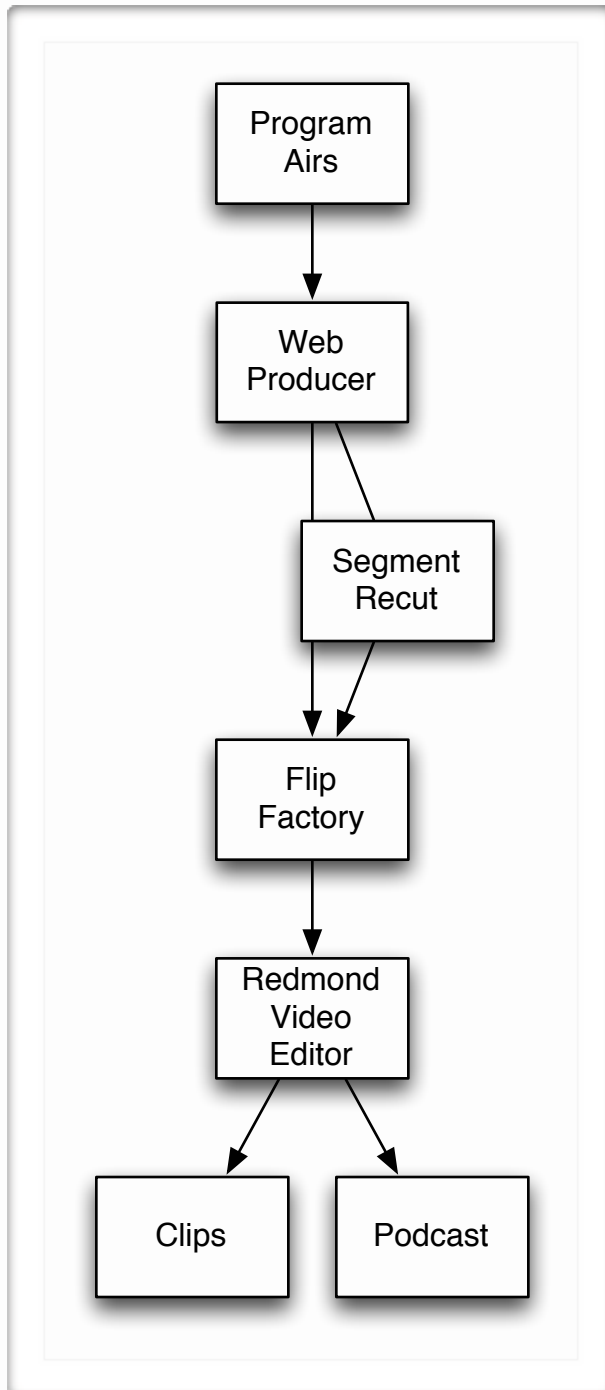


Figure 2.1 // Video Transcoding

During this time, she or he makes notes as to which portions of the show should constitute a clip. Generally the entirety of a show will be made available in the form of clips, but just where the division points between these clips should be is a decision made by the MSNBC.com Web producer for a show in tandem with a Web video producer/editor in Redmond, Washington. Commercial breaks provide “natural” break points in a program for television producers and most MSNBC cable shows are produced in individual “blocks,” which producers sequentially letter A through F, each corresponding to a span of the show between commercial breaks.¹² Show blocks sometimes work as individual online segments as well, but Web producers deciding on how to break the whole show into clips may choose to divide the program up even further if there are logical transition points that come between commercial breaks. As a Web producer decides how a program should be divided into clips, she or he makes a running list of these, along with notes on when each clip should begin and end. S/he then decides on a headline and a caption for each clip, where necessary referencing the script and chyron graphics from the show to ensure that names are properly spelled and that captions offer appropriate context. This list is then emailed, along with any necessary additional instructions or information, to a video editor on the Microsoft campus in Redmond, Washington who has simultaneously been recording a copy of the show off of a live satellite feed of MSNBC cable.¹³ In principle, the editor in

¹² Web producers have access to a show’s script, though the utility of this access varies. For example, a show like Keith Olbermann’s *Countdown* placed stories into predictable numbered slots, which could easily be assigned headlines and other metadata in advance. In the case of other programs, scripts may prove less predictable and prescriptive, and evolve more over the course of a day. In such cases it’s often simpler for the Web producer to focus on creating metadata for the finished broadcast.

¹³ It might go without saying, but Redmond editors have access to a live East Coast feed of MSNBC TV, as opposed to the one cable customers in Seattle see, which is delayed by three hours to accommodate the difference between time zones. For shows like the *Today Show* or *NBC Nightly News*, which may change slightly between their live and taped versions, the Redmond offices will record both the live version and the West Coast edition three hours later, updating the online version of the clips accordingly. Moreover, I should mention early on that there are actually a number of procedures at MSNBC for sending a video to the Web. Those that are relevant I will describe in more detail later on. At the moment, I’m simply illustrating the method by which the majority of television content is processed and made available online.

Redmond will then cut the show up into the clips specified by the Web producer in New York. In practice, generally speaking, the editor will cut the show into clips as it airs as a time saving measure, so all that remains after the show will be to simply add the headlines and captions, along with other metadata. Discrepancies in the clips decided on by the Web producer and those cut in advance by the editor are then reconciled over email. Finally the editor converts the clips to file formats appropriate for streaming using a piece of software called FlipFactory. The utilization of FlipFactory to transcode televised video for use online has led to the parlance, “flipping a video” across MSNBC to refer to the process of putting a video clip on the Internet. Videos that have been transcoded are said to have been “flipped.” The video editor watches the clips for quality control purposes, lest any corrupted audio or video make it through the transcoding process. When the clips are deemed satisfactory, a database entry called a “tease” is then created for each of the transcoded videos. The video editor selects and edits a thumbnail image from each clip that will appear when a video is static and wherever else online a still image is needed to represent the clip. These images are added to the teases, along with the headlines and captions provided by the Web producer in New York. The metadata added to the tease also includes the clip’s source (i.e., generally the show it came from), and any relevant topical categories to which the clip should be assigned (e.g., “Politics,” “Business,” “Entertainment,” etc.). Finally, the video is published to the Web, at which point the clips become available online. In a subsequent section, we’ll examine where they are placed and how they are distributed. For now, however, I wish to pause and examine the various forces surrounding the path the content has taken to this point.

Pressures on the System

How is the path thus far sculpted by heterogeneous engineering? What needles are threaded by the movement of video along this part of the distribution chain, from a televised show to a collection of clips ready to be put in front of online audiences? At first glance, creating copies of a television program for streaming and download would seem to be a simple, contained affair. After all, even before the FCC-mandated switch to a digital high-definition standard in 2009, both television production and distribution were increasingly digital enterprises. Moreover, there are much smaller entities, from local TV stations to lone entrepreneurs who make podcasts and Web video, and NBC Universal itself runs numerous Websites, including the video-intensive NBC.com, and several NBC News-affiliated current affairs sites like Education Nation and The Grio whose video operations depend little or not at all on Microsoft or its Redmond offices. How, then, did putting MSNBC cable shows online come to involve coordination between employees and computer networks in New York City and the Seattle suburbs?

There are economic, cultural, and technological factors all coming into play here that require us to go backward and revisit the inception of MSNBC. MSNBC was a joint venture, which began in December of 1995 as an agreement between NBC (later NBC Universal, and currently NBCUniversal) on the one hand and Microsoft on the other, to create a cobranded Website and cable news channel. The deal would lessen the cost pressures on NBC's news division by making the network's investment in NBC News bankable across more hours of television (Harper, 1998; Furman, 2002; Collins, 2004). It would also allow NBC to compete with CNN, which had stolen away ratings and viewers during the first Gulf War (Taylor, 1996;

Collins, 2004), and give the company an aggressive foothold on the Web, which at the time was clearly of growing commercial importance—and where CNN was also already establishing a highly competitive presence (Taylor, 1996). Microsoft, which was enjoying meteoric profits in the wake of its Windows 95 release, was looking for ways to sustain its rapid rate of growth, which meant continuing to expand into industries beyond software (Harper, 1998). The online media business seemed potentially lucrative as an area for expansion, and Microsoft invested millions of dollars into the launch of the Microsoft Network (MSN) dial-up service as part of Windows 95 (P. H. Lewis, 1996)—though as Bob Sullivan, an MSNBC.com staffer recalls, Microsoft initially didn't foresee the Internet as being a part of this strategy:

I was actually hired to work on something called MSN News before there was an MSNBC, out in Redmond. It was the precursor to MSNBC. And at the time—this was the Windows 95 launch—the MSN Network was akin to AOL Network, which was its own totally separate dial-up, closed community. You couldn't get to the Internet from AOL and you couldn't get to the Internet from MSN. My first few months there I was dialing up computers at the University of Missouri to get on the Internet. At Microsoft. To show people the Internet was pretty cool and they should think about it. And there was a time where the guy who was in charge of the whole thing—there was a big company meeting and he said, “MSN will never be on the Internet.” And in fact, you know, “We're better than the Internet. So the Internet's coming to us.” And that's been a profound lesson to me over and over again, because basically closed systems just don't work in our world.

By the end of 1995, however, “the exploding popularity...of the Web [had] compelled Microsoft chairman Bill Gates to rethink the company's on-line strategy” (Taylor, 1996). To put the

situation in perspective, while the MSN dial-up network accumulated over a million subscribers in its first eight months of operation, the number of Americans with access to the Web grew to 15 million during this same period (P. H. Lewis, 1996). This put Microsoft in the position of playing a particularly costly game of catch-up. As New York Times contributor, Peter Lewis noted in 1996, “Microsoft spent millions to build the Microsoft Network before abandoning it for the Internet model late last year. The transition forced more than 200 companies [inside and outside Microsoft] that had been developing products and services to in essence start from scratch to deliver Web-based products.” As part of its transition to Web media, the company struck its deal with NBC in December of 1995. Over the course of the following year Microsoft also launched the online magazine, Slate.com, and made MSN News freely available on the open Web in preparation for its transmogrification into MSNBC.com (Taylor, 1996). The remainder of MSN’s media content was subsequently migrated to the Internet as well (P. H. Lewis, 1996), forming a family of MSN Websites—including MSNBC.com—that still exists today.

What’s more, Bill Gates and his executives at the time saw some form of interactive television as likely to be the next major media market following the Web¹⁴ and viewed a partnership with a major television company as essential to competing in this arena (Collins, 2004). Microsoft made abortive inquiries with the BBC to this effect, then aggressively pursued a partnership with the Turner Broadcasting System (TBS), which could have resulted in the two companies teaming to buy CBS (Weiner & Stalter, 1995; Collins, 2004). Prospects of a Turner-Microsoft partnership fell through, however, upon the sale of TBS to Time Warner, after which Microsoft was courted by, and ultimately signed their deal with, NBC to create MSNBC

¹⁴ In this vein, Microsoft invested in the 1996 startup, WebTV, and went on to acquire the company the following year, eventually turning it into a full division of the corporation (Markoff, 1997; Croal, 2000).

(Collins, 2004). Convergence was becoming an industry buzzword by the mid-1990s, to the extent that, as *Seattle Times* correspondent Chuck Taylor (1996) put it, “conventional wisdom foresees a single medium combining television and computers. Microsoft and NBC say they want to be ready for this.”

Any talk of convergence should not be overstated, however. From their inception, MSNBC.com, the Website, and MSNBC, the cable channel, have remained largely distinct enterprises in many ways. Harper (1998), who briefly chronicled the launch of MSNBC in his book, *And That's the Way It Will Be*, noted that despite sharing a brand identity, the television and Web companies were run largely independent of one another—an observation shared by a number of other journalists who also looked at the origins of the joint venture (Taylor, 1996; Collins, 2004). The cable channel grew out of NBC News and one of NBC Universal's existing cable channels, America's Talking (which MSNBC replaced), locating its studios in Secaucus, New Jersey, while MSN News became MSNBC.com and remained headquartered on the Microsoft campus in Redmond, Washington (Taylor, 1996). Though the Website maintained basic information about the cable shows, including transcripts and selected audio clips, the bulk of its content remained largely independent of what viewers saw on television. According to Collins (2004), who chronicled the early history of the joint venture, while the startup costs of both the Website and the cable channel were shared across the two parent companies,¹⁵ Microsoft largely viewed getting the TV channel to work as NBC's responsibility and, similarly, NBC saw the Website as a job for Microsoft. By many accounts, this became the persistent position of the two companies. In 2005, for instance, *New York Times* correspondent Bill Carter reported that

¹⁵ Under the terms of the deal, Microsoft paid \$220 million for a 50 percent stake in NBC's America's Talking cable channel, which was then converted into MSNBC TV. Moreover, Microsoft and NBC agreed to each invest a minimum \$200 million in the creation of MSNBC.com {Collins:2004vj}.

“NBC executives have said for years that Microsoft [has] never had any editorial control of the [cable] channel.”

The idea that the Website would be a separate entity with access to, but not necessarily a focus on, MSNBC TV content was reflected in the financial terms of the original partnership agreement, in which Microsoft assumed a client role with respect to television, agreeing to pay \$20 million annually, over and above its initial investment, for the rights to use MSNBC and NBC News television content online (Collins, 2004). What’s more, by some accounts the terms of the joint venture were more favorable financially to NBC than to Microsoft—a topic which became a source of tension between the two corporations (Collins, 2004; Carter, 2005). In 2001, Microsoft’s chief executive, Steve Ballmer, went as far as to publicly state that if his company knew in 1995 what it did six years later, they would not have agreed to start the cable channel at all (Lieberman, 2001; Collins, 2004; Carter, 2005).

Part of this expressed malcontent may have stemmed from a perception of inequalities in the terms of the partnership, but there were also technical and market elements to it. As indicated above, Microsoft anticipated being able to make money from MSNBC.com partly by turning it into a portal for interactive video. As USA Today’s David Lieberman (2001) put it, Ballmer “envisioned offering news video to a country hooked on broadband,” but when MSNBC.com launched in 1996, broadband penetration was very low, and industry observers at the time likened attempts to stream online video to pumping peanut butter through a straw (Harper, 1998). Unfortunately for Redmond, the U.S. market and infrastructure both proved recalcitrant. In 2001 broadband access was still relatively sparse and progressing far more

slowly than Microsoft had projected, making the terms of the joint venture less favorable to the Redmond company than they might otherwise have been.

These various discontents came to a head in December of 2005, when Microsoft quit the television side of the joint venture, selling its stake in the cable channel to NBC Universal (Carter, 2005).¹⁶ The MSNBC joint venture remained in the form of the Website (which continued to pay a license fee to NBC Universal), but the television and Web operations were now formally separate, driving home the dot-com's role as the online distribution channel for NBC News and MSNBC cable. In the interim, U.S. broadband penetration—which was at 9% at the time of Ballmer's 2001 statements, and still less than 50% when Microsoft quit the television venture in 2005—has finally reached a majority of Americans. The latest Department of Commerce figures show 68% of U.S. households with a broadband connection by October 2010, a group which in turn make up nearly all of the 71% of American households with any form of Internet connection (National Telecommunications and Information Administration, 2011). In turn, the market for online video is now enormous and growing. According to the market analysis firm comScore, in March 2011 alone, 83.5% of the U.S. Internet audience watched online video at an average of 14.8 hours per viewer (comScore, 2011). And as online viewing rises, advertisers are increasing the amount of money they spend on online advertising as well (BrightRoll Research, 2011). The video distribution component of MSNBC.com, then, becomes an especially important part of the joint venture to Microsoft as the once-onerous license fees paid to NBC for video news content are transmuted by a growing market into a value-making

¹⁶ More specifically, NBC acquired an 82 percent (i.e., majority) stake in the cable channel in 2005, agreeing at the time to purchase the remaining shares from Microsoft in two years (Carter, 2005).

proposition—one it's unlikely to relinquish any time soon, given that under the terms of the joint venture, its contractual rights to the television content extend through 2094 (Carter, 2005).

Not only have MSNBC TV and MSNBC.com grown into highly distinct enterprises, they run on very different computer infrastructures. Show segments at the cable channel and NBC News are cut together using non-linear digital video editing systems from Avid, which provides not only basic video editing hardware and software, but accompanying software for script-writing and internal communications among editorial staff, as well as a full line of specialized post-production programs—all linked together via NBC News' intranet. These software tools together form a robust content management system (CMS) that incorporates a host of multi-user tools necessary for prepping and assembling a newscast, including highly specialized features down to an algorithm that examines pieces of a developing script and estimates the number of seconds each will take to speak on camera. It also includes more general instant messaging functionality and other communication tools for coordinating the activities of staff members. The multi-user scripting and internal communication component of this software, iNews is directly descended from NewStar and BASYS, newsroom automation systems developed in the 1980s (Dynatech, 1985; Glink, 1989; Tektronix, 1999; iNews, 2000; Grotticelli, 2001). The immediate predecessor to the contemporary iNews software, Avstar, was installed at NBC News and MSNBC cable in 1999 ("NAB99," 1999). A separate dissertation could be written on the evolution of iNews and Avid as a social/technological system, and its ubiquity today among national broadcasters. Suffice it to say here that over its history, the software has become such an essential component of the workflow for many news programs at NBC News and MSNBC cable as to be a structuring element in the workflows of many staffers. Individuals who worked

directly on the broadcasts seldom mentioned iNews—it had become part of the wallpaper, so to speak. But the television staff’s dependence on the software made an impression on the MSNBC.com staffers in New York, who commented on how engrained it had become on several occasions. “It was written like 40 years ago in DOS,” said one in a tone that suggested he was only half exaggerating. “And that’s what it’s for. It’s for someone to, like, land in Vietnam with a box [holds hands apart to suggest large box]. You could open it up and communicate.” Another commented that iNews dominated the workflow of some news programs, was “how most communication gets done” among the staffs of some shows, and suggested that over time broadcast journalists had learned to use iNews to the exclusion of other more mainstream software and communication tools.

The point of this extended discussion of iNews is to underscore the maturity and widespread adoption of a system for content management among television staffers at NBC News and MSNBC cable. From the time that the first words and graphics for a script are penned and drawn up to the time the resulting segment is cut for air to the time the anchor reads the introduction off the teleprompter, content lives within this ecosystem of Avid software. Afterward, it is archived in NBC’s digital archive system, known as Ardome. MSNBC.com’s CMS is involved enough that it will be best to explain it in more detail at a later point, but the upshot for the moment is that the software tools and computer networks used by staff at NBC News and MSNBC are different from, and developed largely independently of, the ones employed by MSNBC.com. This has resulted in what one Web producer referred to jokingly as a host of “bridges, demilitarized zones, and virtual desktops” necessary for getting the two systems to talk to one another.

At this point, we can see how the route MSNBC cable shows take to the Internet is influenced by the interaction of a number of powerful heterogeneous engineers. Executives at NBC and its owner, General Electric, wanted a 24-hour cable news network in order to reduce the cost pressure on NBC's news division, keep viewers from moving to an insurgent CNN, and develop an Internet presence in time to be competitive in the growing online news market that its rivals were also entering. Microsoft executives saw a partnership with a major American television company as a necessary step in what it perceived to be a potentially sizable market for interactive television, and welcomed an outside investment that could help the company to retool its online media strategy. Each made use of existing, geographically situated resources—Microsoft built and staffed an MSNBC Website in large part with the resources of MSN News in Redmond, while MSNBC TV built out the resources of NBC News in New York, and took over the studios, satellite transponder, cable providers, and cable subscribers of NBC's defunct America's Talking channel in Secaucus, New Jersey.¹⁷ The movement of video from television to the Web now necessarily traverses a route that reflects the original interests, financial incentives, competencies, and contractual obligations of the involved parties—NBC will make television, and Microsoft will put it online. The distinct content management systems and technical infrastructures of NBC News and Microsoft also reflect these different organizational foci, impacting the route video content takes. Rather than being pushed to the Internet directly from NBC's digital video archive, MSNBC cable content is generally broadcast via satellite, re-recorded in Redmond, then divided into clips and assigned metadata negotiated between MSNBC.com's staffers in New York and Washington, and finally entered into the separate

¹⁷ After NBC took a controlling interest in the cable channel, the offices were eventually consolidated into 30 Rockefeller Center in Manhattan, where NBC News is headquartered, as a cost-cutting measure.

content management system at Microsoft. This path, again, bears the impression of myriad heterogeneous actors lashed together by the groups involved and traces out on the map the solution available to MSNBC for putting video online. Moreover, we've come to see that MSNBC and its digital distribution strategy are not the product of a single system builder or heterogeneous engineer, but of multiple system builders—this multiplicity is something that will be fleshed out and explored further in the following chapter.

Placing Online Video

Once the segments for a show have been flipped, the video editor in Redmond sends an email to the Web producer in New York with the final metadata from MSNBC.com's CMS for each of the newly published clips, including the URL, ID number, story slug, and GUID,¹⁸ to notify him or her that they are now available. The Web producer will use these to help place and promote the segments, and may also decide to request additional versions of a clip from the video editor if, say, s/he wants to make a highlight from a show segment available as its own stand-alone clip alongside the full version. But once the clips are available online, where do they go from there? The brief, but not terribly useful answer is: many, many places. For a more valuable discussion of where videos go next, it will help to organize the discussion a bit by examining distinct distribution paths for video in turn.

MSNBC videos on the Web appear in a video player developed especially by and for MSNBC.com. The display of this player is object-oriented and can be presented in a number of

¹⁸ A GUID is a unique identifier, generally a URL, that accompanies the clip when it is published in RSS feeds.

forms.¹⁹ On a story page, for instance, the player and video might appear on the page alongside a printed story on the same subject. On different page, the link to video might appear as a thumbnail and/or a headline that, when clicked, launches the video in a standalone player, appearing in a pop-up window. And on the MSNBC TV homepage (which exists as a “microsite” within MSNBC.com) or the homepage for a particular show—generally referred to at MSNBC as a “show front”—the video player appears prominently as the centerpiece of the page (Figure 2.2).²⁰ The player also has a variety of skins, appearing with a different backdrop depending on whether it is playing a Today Show clip or a segment from The Last Word, for example (see Figure 2.3).

¹⁹ Less technical readers may want some introduction to the basic concept of object-oriented programming. A nice analogy would be that of MUDs and other computer games or environments that simulate the real world. In the physical environment, it makes sense to us that everyday objects lend themselves to a particular class of uses. We understand that you can write on a sheet of paper, fold it, crumple it, tear it, and so on. We also understand that paper is less useful for other purposes—we wouldn’t try to put out a fire with it, or use it to hammer a nail. When an object, like a piece of paper or a pistol is recreated in a game, the designers have to explicitly define all the things it can be used for and how it should behave under specific circumstances, such that the user can interact with it in familiar or predictable ways. Similarly, in object-oriented programming, developers create data “objects” that are context-aware, allowing them to be used in multiple ways. For instance a series of data points could be programmed as an object that can be presented variously as a list, a table, a series of RSS items, and so on. In this same way, clips in MSNBC.com’s video player are able to appear in a number of forms across the site.

²⁰ MSNBC.com is in a transitional period at the moment, and some shows like the Ed Show or The Last Word have made a blog their homepage, rather than a video-centric show front. This trend will be discussed in the following chapter.



Figure 2.2 // Show Front

Note the dominant video player and the “grid” of links and headlines that appears at the bottom of the page.

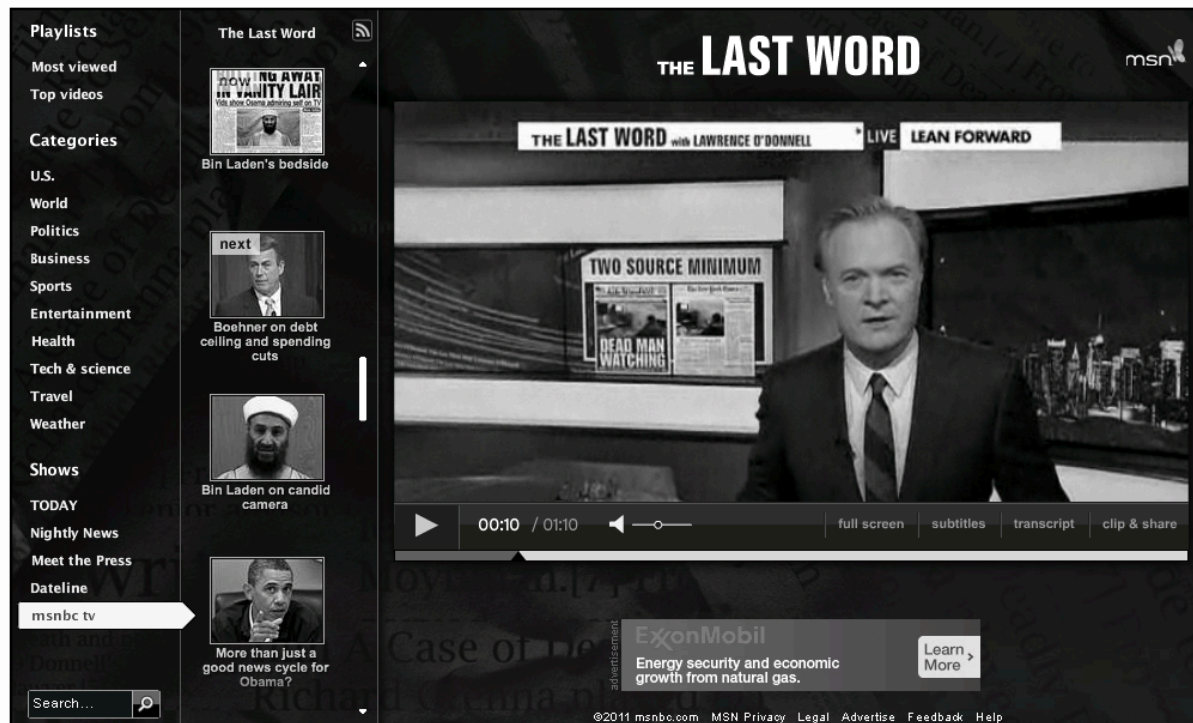


Figure 2.3 // Standalone Video Player

Note the video-specific template and the various news categories.

Video players need something to play, of course, and wherever a player appears, it is assigned a playlist that will begin with the clip requested by the user and afterward keep rolling related video clips. This list of upcoming clips is also displayed in the player as a series of thumbnails and headlines, allowing the user to skip ahead to clips she is interested in. In some cases, this playlist is generated automatically. The standalone video player, for instance, has a navigation sidebar from which users can select any of a variety of major news topics, such as “U.S.,” “World,” “Sports,” “Tech & Science,” and so on. These playlists are automatically populated with any clips that were assigned to these categories when they were initially entered into the system. Other more topically specific playlists can also be automatically generated from metadata searches and other sorts of database queries. Many topic-based playlists are also manually generated, however. One MSNBC.com staffer who worked with the Today Show explained that “it’s up to us to decide, ‘Should we make a playlist?’ And generally if there’s more than like four, five clips on a topic, we will go ahead and make a playlist for it.”

The playlists for show fronts must also be generated manually. Immediately after the video producer in Redmond finishes publishing the clips for a given show, s/he will then enter them into the playlist populating the video player for the show’s section front. Similarly, lists of thumbnail links to videos (which when clicked in turn launch video player itself), are populated in some places by automatically generated RSS feeds—this is the case on the blogs for programs like The Rachel Maddow Show or The Last Word. And in other places, such as amid the “grid” of links and headlines on a show front, the MSNBC TV microsite, or the MSNBC.com front page, links to video are entered and ordered manually by MSNBC.com Web producers. Links and videos that appear on the show fronts, show-related blogs, and the MSNBC TV site are, in

general, handled and/or supervised by a team of MSNBC.com Web producers in New York, currently under the direction of Jesamyn “Sam” Go, and each assigned to maintain the Web presence of particular shows.²¹ Elsewhere on the site, such as on the MSNBC.com homepage, as well as on other non-show story pages and “section fronts” like Health or Politics, MSNBC and NBC News video appear at the discretion of other MSNBC.com editors and producers. Finally, Web producers assigned to particular shows will often include clips from recent programs in posts to the show’s blog. Embedding video in blog posts involves the use of MSNBC.com’s embeddable player, which will be discussed in more detail later on, as will blogging for the television shows more generally.

Pressures Surrounding the Video Player

Given that the MSNBC cable channel and Website share a brand name, it might seem natural for MSNBC cable content to appear prominently on the front page—what employees call “the cover”—of MSNBC.com. Recall, though, that while MSNBC.com assigns producers and other staff to work with the cable programs, as we saw above, MSNBC TV and MSNBC.com have been run as largely distinct enterprises. Moreover, the distinctiveness of the two has grown over time. After MSNBC.com was formally split from the cable channel, the Web venture began expanding on its own. In the period between 2007 and 2011, MSNBC.com expanded its portfolio of Websites far beyond its original domain. The MSNBC.com domain has come to be referred to as the “Blue Site” to distinguish it from the company MSNBC.com, which in the last five years has refashioned itself into the “MSNBC Digital Network,” acquiring Newsvine.com

²¹ NBCUniversal is now just beginning to hire additional MSNBC TV/NBC News Web producers onto its own payroll. This is a trend that will be discussed at length in the following chapter.

and EveryBlock.com, launching an internal startup called Breaking News, expanding its content partnerships with the rest of the MSN network, as well as other vendors, and spinning off the *Today Show* section of the Blue Site into its own domain, Today.com.

There has also been a widening split in editorial strategy between the Blue Site, still the Web company's flagship property, and MSNBC cable. The cable channel began as an extended platform for NBC News and espoused a similar non-partisan editorial philosophy. However, the channel continually struggled in the ratings (de Moraes, 2002; Collins, 2004), and in the wake of the marked success enjoyed by the increasingly conservative panel of commentators on the Fox News Channel through the Clinton impeachment and later the 2000 elections, the management of MSNBC cable ultimately decided in 2002 that it would be necessary to shift to an opinion and commentary format in order to remain competitive in the cable news market (Carter, 2002; Collins, 2004). At the time, MSNBC President Erik Sorenson described the strategy as a move to "op-ed" television (de Moraes, 2002).²²

Initially, however, op-ed programming did little for the the cable channel's ratings, as evidenced by what many viewed as a highly disappointing turnout for Phil Donahue's program, after MSNBC hired him as a liberal commentator to fill a marquee primetime slot (de Moraes, 2002; Carter, 2002; Furman, 2002). The show was cancelled in less than a year, but the channel remained committed to an opinion format in primetime despite continually trailing in the ratings. Then, several years later, in 2006 MSNBC's primetime host Keith Olbermann began to draw strong ratings and industry accolades with his criticism of the Bush administration and its Iraq

²² It should be noted that this initiative by MSNBC management was not a decision to become a liberal counterweight to Fox News, but rather to begin offering and highlighting opinion programming, irrespective of its political leaning. As former NBC Universal CEO Jeff Zucker described it recently at a gathering of *Harvard Crimson* alumni, "We didn't have a secret meeting where we said, 'maybe we should just go left'" (Stoll, 2011). Over the years, MSNBC has employed a number of prominent conservative commentators in primetime, including former Republican Congressman Joe Scarborough and *Policy Review* alum Tucker Carlson.

War policy, subsequently becoming an outspoken liberal commentator (Bauder, 2011). His continued ratings success made him an influential figure within the cable channel, and many of the contributors who became popular on his program subsequently received their own MSNBC shows (Bauder, 2011; Carter, 2011; Farhi, 2011). Zucker recently recounted that after viewers began tuning in for Olbermann, the remaining primetime lineup was designed to flow around his program (Stoll, 2011). MSNBC's primetime programming eventually became a lineup of outspoken left-of-center anchors and commentators, including Ed Schultz, Rachel Maddow, and Lawrence O'Donnell—a liberal rebranding culminating in the channel's current marketing campaign, titled "Lean Forward," which paints MSNBC TV as a progressive news and commentary network (Lafayette, 2011). This shift to partisan programming was widely credited with helping to lift MSNBC out of last place in the cable news ratings contest (Farhi, 2011; Schechner, 2011).

Meanwhile, the Blue Site, which still hosts the online presence of these cable programs, has itself risen to become extraordinarily popular—in 2005, at the time of its split from the cable channel, the New York Times dubbed it "the most-used news site on the Internet" (Carter, 2005), and it consistently remains among the top three most trafficked news outlets in the U.S. alongside CNN.com and Yahoo! News (Stelter, 2010b). MSNBC.com has achieved this success while continuing to brand itself as a non-partisan news provider (Kaplan, 2010; Stelter, 2010b). By 2010, this difference in editorial strategy between two properties that shared a brand name and cross-promoted one another's content had become a source of tension between the television and Web companies. Brand-conscious executives and editors at MSNBC.com have tended to worry that consumers will confuse the two properties, polluting the objective image of site

(Kaplan, 2010; Stelter, 2010b; Wallenstein, 2011). In one internal memo, obtained by the *New York Times*, MSNBC.com President Charles Tillinghast opined that “both [the partisan and objective] strategies are fine, but naming them the same thing is brand insanity,” and that the crystallization of the cable channel’s partisan identity through the current Lean Forward marketing campaign “only exacerbates the brand misalignment problem” (Stelter, 2010b). Behind the scenes at MSNBC there are a variety of plans to alleviate this predicament. A more immediate outcome, however, has been that the Blue Site, in order to preserve its non-partisan image, has tended to avoid promoting MSNBC cable programming on its cover. Instead, MSNBC TV has been given its own microsite, located at the subdomain, tv.msnbc.com, and the various shows have been given their own blogs and/or show fronts, smaller sites located at subdomains like maddow.msnbc.com or hardball.msnbc.com. For the most part, these sites are designed to stand alone, drawing users through on-air promotion, search traffic, and the MSNBC TV homepage. Some of the subdomains are linked to from the MSNBC.com cover, but they are grouped in the header with other related Web properties, like Hotmail and Bing, in a way that suggests limited connection to the primary editorial functions of MSNBC.com (Figure 2.4).

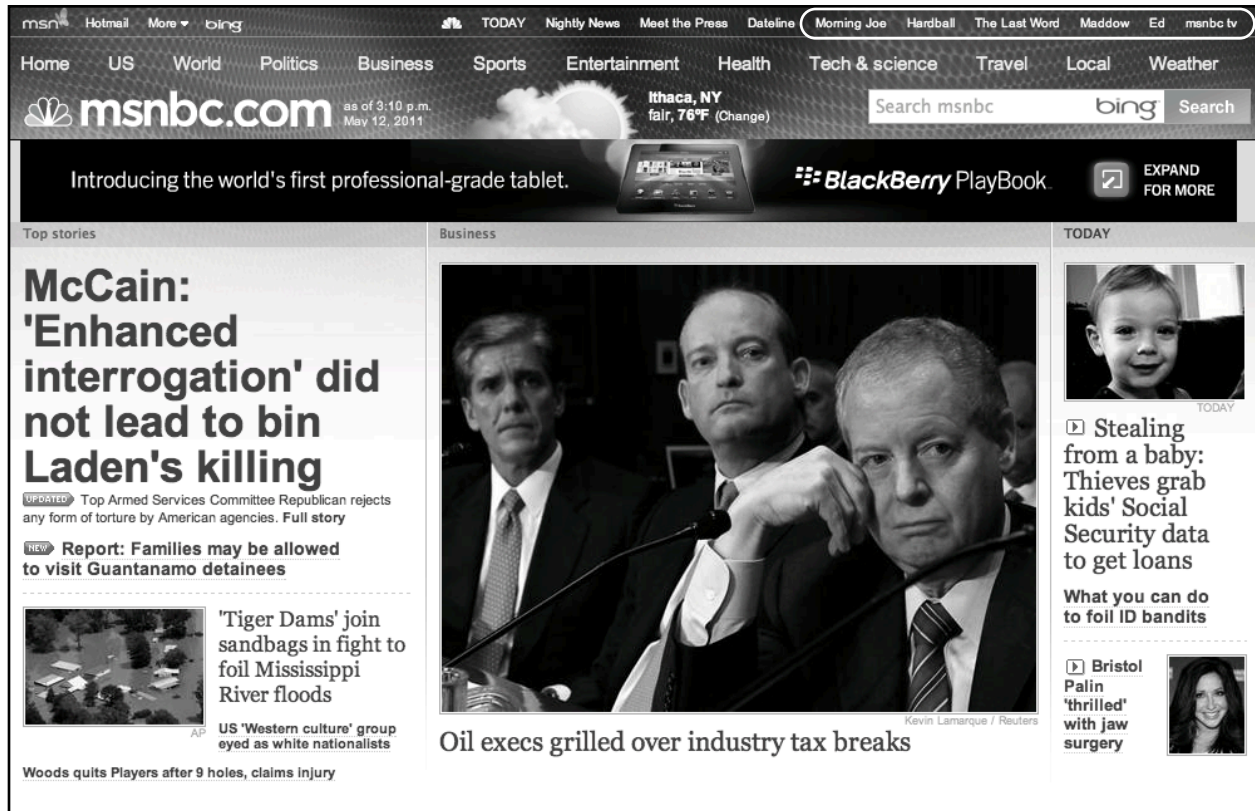


Figure 2.4 // The MSNBC.com Cover

Note the positioning in the header of links to MSNBC cable programming, highlighted with a rounded box above.

The show fronts for other non-primetime MSNBC cable programs, such as the Dylan Ratigan Show, are not linked off the cover, and still others like NewsNation with Tamron Hall or Andrea Mitchell Reports don't have show fronts or blogs at all, but rather single pages within the MSNBC TV subdomain.

Another issue that often limits the promotion of marquee television content online, not just at MSNBC.com, but at many television news sites, is that the material produced for primetime television newscasts is generally an after-hours recap of the day's events—but the bulk of Web traffic to news sites happens during the daytime, when people are logging on from work, looking for the freshest stories (Boczkowski, 2010). As one dot-com staffer put it,

The Web world fills this crazy gap of realtime media consumption, because before it came along it was like, "I know I check my news then and I check it now." Now people just check it all day long. You know, the tagline of this building, for online, is, "Daytime's our primetime." From nine to five is when we get all of our traffic. As it should be, right? I mean, you're at work, you take a break.²³

The upshot of this is that by the time users browsing from work get to the Web version of the previous evening's broadcast, not only is it no longer breaking news, it's literally yesterday's news. That not only decreases its relevance for many online news consumers, it also makes it hard to promote even when the network and Web brands are well aligned. For instance, the NBC Nightly News takes an objective reporting stance that is in many ways highly compatible with the mission of MSNBC.com. Despite this, the problem remains that the news cycle for the NBC Nightly News is heavily out of sync with the rest of the content produced for the Blue Site,

²³ Similarly—and not unrelated—the 24-hour news cycle is frequently pointed to by industry observers as an explanation for declines in television ratings among evening news broadcasts.

which can be a problem when it comes to placing the broadcast's content. After all, the front page of MSNBC.com, like those of ABCNews.com and CBSNews.com, isn't a mere promotional vehicle for broadcast properties, but a breaking news site with a mandate to compete with Yahoo! News, The Huffington Post, and NYTimes.com. Throwing up a 15-hour-old clip of the previous night's broadcast as consumers file into their desks in the morning generally won't help them in that regard. This means that, from a metrics standpoint, only a small subset of what's produced for each evening's newscast, such as "evergreen"²⁴ feature stories or exclusive interviews, may be worth heavily promoting on the cover from the Blue Site editors' perspective.

A middle strategy is to link to television segments from story pages. MSNBC.com launched a redesign of its story pages in 2010 to be more multimedia-friendly, as well as to allow editors to be more flexible in their organization of content. In addition to the latest text of a story, editors can now quickly add and arrange embedded media objects, including, often, a video player and/or photo galleries related to the story. On the one hand, the newly flexible story page architecture is intended to allow stories to be continually updated with the latest reports, regardless of what format they might be in. But now that many media types can all be housed under the roof of a single story page, this also means a text story can be supplemented with a slightly older clip without sacrificing the availability on the page of the latest information. Despite mitigating some of the temporal issues with posting primetime news video, however, MSNBC.com story pages still tend to feature NBC News broadcast video far more frequently than clips from MSNBC TV, most likely owing to the division in editorial strategy mentioned earlier.

²⁴ Journalists refer to stories as evergreen when they're not attached to an event or specific news peg and therefore likely to be of interest irrespective of when they're read or published.

With that said, neither broadcast nor cable clips are guaranteed a spot on a story page, much less on the cover of the Blue Site. This results in a need on the part of the Web producers who work with the various television programs to pitch their clips to the cover editors if they want show material to be featured on MSNBC.com outside of the cable microsite and show-specific pages. A substantial part of the job of many television-attached Web producers, then, is to maintain a peripheral awareness of the material that's being posted to the MSNBC.com front page, so as to make the most of opportunities to cross-promote relevant clips from their shows to the cover editors. Cynthia Joyce, the MSNBC.com Web producer assigned to The NBC Nightly News described this state of affairs:

JB: When you're trying to promote Nightly [News] to other people within dot-com or promote Nightly out on the Web, what sorts of things do you have to do? How do you have to package things?

CJ: It's funny, it's like watching—well, maybe ecosystem—it's more like a solar system. It's like, you almost have to see if there's a star moving past. And see if you can time it right—you're just constantly trying to sort of dovetail your content with something else that already has that momentum.

Once the video player has been placed and the user has loaded a video, everyone at MSNBC.com would invariably like the user to consume additional video, since the more video gets watched, the more revenue is drawn from the advertisers paying to insert video ads with each clip. This is where playlists come in, which are designed to show users more of what they're potentially interested in. As Boczkowski (2004) and other journalism scholars, like Anderson (2009) have pointed out, a particular view of the user is inscribed in the design and layout of news sites and

Websites more generally. Moreover, designers and editors are often put in the position of considering multiple audiences and user groups simultaneously. For instance, Battelle (2005) has noted that search engine designers must account for both users who are trying to find information for the first time, as well as users who count on using the search interface as a navigation tool to easily locate and revisit Webpages they've seen before. Similarly, a video player and a playlist are constructed with multiple audiences in mind. Sam Go, who heads the team of MSNBC.com Web producers in New York who put cable and broadcast content online, described a number of different user groups that the dot-com staff generally consider in creating a playlist:

[On] the sites we manage, we're always thinking about...different audiences: The people who are familiar with our show, our audience who might have already watched it. And maybe they're doing it for playback, maybe they're grabbing a link to send video of a segment to a friend. Or maybe they're just fans of the show, so they want to know more about the anchor, or what they're reading about or tweeting. And so there's that, where a Web viewer doesn't want to see the segment again sometimes, but they want it available. And then there's people who just consume [the show] off the Web. Maybe they live abroad, or maybe they don't have that channel on cable, or maybe they weren't home, because on-demand is the thing now. And then the last category is people who sort of wander into it from other sections of the site, or are watching something else on the site and then find that specific segment. So, to us, a lot of it is tagging content by categories, and having that make sense. Because it [content] has to live in this little bucket, and it has to live in this whole portal of video. So we need to write headlines that make sense,

headlines that are attractive, because outside of the show and whatever buzz that segment generates or where else it might be embedded, that's the only way the video will get more attention. So we spend a lot of time. Cathy and Will [MSNBC.com Web producers attached to TV shows], every day they go back and forth about headlines and topics because they know...somebody could be watching a Nightly [News] clip on politics and see a Chris Matthews' headline and consume that video. And the design of the portal is good enough that people consume more than one clip. So if they launched something related from within the network, or from Twitter or the MSNBC.com cover, a Web user inevitably they would find something they would like as well. So, I think that's sort of the brilliance of the design.

At this point, we can begin to see why shows are broken up into clips in the first place—they allow the flexibility necessary for targeting multiple user groups simultaneously. Users who want to see a complete show on-demand using the Web can browse to a show front, where the player that's presented to them is queued to a playlist that will present the entire program in order. Meanwhile, individual clips can be grouped into playlists based on categories (e.g., politics) and topics (e.g., a health care bill) that can be placed with more stories across the Blue Site and will appeal to users approaching MSNBC.com with topical, rather than show-specific interests. Sarika Dani is an MSNBC.com staffer who works with Today.com, which was recently spun-off from the Blue Site and redesigned as a portal dedicated to Web content surrounding NBC News' Today Show. As she puts it,

The way we present the show online is clips. If you've looked at our video player, it's broken up into category and then it's like, clips. A three-minute segment, four minute

segment, seven minute segment—like that. And the sort of strange thing about that is it's a show and the show is—It's a *show*. It's not meant to be clipped necessarily. But at the same time it is, because it's like here's this three minute cooking segment and then we're going to move over and change the subject, do the fashion segment. So I guess it was like the chopping up of the show format for parceling out online...so then you can kind of target the content to different audiences. You get more bang for your buck almost, because you're not forcing someone to watch the whole show, but they can be targeted about what they—you know, they can get deep into one topic. Like, if they watch a Bobbie Thomas beauty segment on Monday, they start watching that and it's going to launch a whole playlist of more fashion and beauty stuff. And they can just keep watching that, as opposed to, when they're watching the show, they would have to jump around topically. (Emphasis original)

At the same time, beyond the basic automated categories to which a clip is assigned, there is a good deal of leeway in how to organize clips into playlists, which can lead to more contemplative debates among Web staff as to how users look for content. Dani continues,

We have a lot of discussion over playlisting. It's become something we pay attention to, definitely. One argument I always make is when you playlist something too much—like one example is we have a “bullying” playlist or something like that. You know, all these awful cases in the news of kids committing suicide over bullying in schools and whatnot. You know, you watch one clip and then you end up getting into this playlist of more bullying stuff—so you can see a psychologist give their take on it, or you can hear the latest news about the suicide of a teenager. But then you also lose—What the show has a

little bit is like the serendipitous discovery of content, which you could argue some news users look for news that way. Like, “Here’s this completely unrelated clip that I didn’t know I was looking for, but I found it because I clicked on this other thing that I was looking for.” And so that serendipity kind of drives you deeper and deeper into exploring stuff on the site. Or you can have the fashion and beauty example where you’ve got the fashionista who wants to keep watching fashion segments or celebrity segments because he or she loves entertainment or whatever. So I think there’s a danger in over-categorizing. But I think there’s benefits as well. So you kind of have to just be aware of it.

Dani’s observations in many ways recall arguments by scholars like van Alstyne and Brynjolfsson (1996), Putnam (2000), Christine Rosen (2004), or Sunstein (2007), who’ve debated the implications of the increasing ability of consumers to narrowly confine their exposure to information. The difference here is in the fact that playlisting is under the control of producers, rather than an “egocasting” user base in the sense outlined by Christine Rosen (2004); there is no recommender system at work here, but rather human news/marketing judgment about how to group stories in a way that’s likely to be interesting to different subsets of users. At the same time, even seemingly straightforward playlisting tasks are more complicated than they might at first appear. For instance, while many shows, like *Today* or *The Rachel Maddow Show* can be cut up into segments that work reasonably well as standalone clips, other shows—a magazine program like *Dateline*, for instance—must be made to work within the same procrustean system. *Dateline* dedicates a full hour each episode to the same topic, and as such clips are generally given the title of the show, plus a suffix like “Part 3.” But such clips can

become awkward when they begin showing up in automated playlists around the Blue Site. Sam Go described the continual challenge for Web producers of thinking about clip categorization and playlisting in a way that simultaneously takes into account a broad variety of programs and numerous types of users.

Whatever the last headline—the newest headline, is...in the hierarchy it just shows up on top. Where if you're programming Dateline, you don't—The freshest, by definition [the last published], is "Part Six." So you're trying to account for all these different behaviors for a site that was designed for news. And the Web is becoming more and more like a lean-back experience where you have people who want to watch Nightly and just turn the "TV" on and just go through all the clips without having to make any selections. And people who are like, "No, I just want to find out about Haiti, so I just want to look at that," and they don't want to have to play like they do Hulu and go to the thirteenth minute to find that video. So, I think accounting for that is becoming more and more complicated and I think our users are becoming more and more demanding, where they want it to be easy and they don't want to think about the ten other purposes for your content. And they just want it to be easy to them.

The playlisting technology, then, is at once a resource for getting more video to potential consumers, but can also prove recalcitrant when it fails to provide the experience for which particular sorts of users come to the site.

Once again, we can see how heterogeneous forces—some bound together, others imposed—trace out the solution available to MSNBC.com for presenting televised video online. The path of video threads needles between the various interests involved in the system. Video is a

great source of value for MSNBC.com, so it features it prominently on microsites dedicated to specific shows, as well as to the cable channel more generally. However, because the financial and editorial interests of the cable channel and the Web venture have diverged over the years, with the former capitalizing on opinion and commentary while the latter fashioned itself into a non-partisan news site, video content from the cable network also tends to conflict with the editorial and branding strategies of the Blue Site, which has led to highly limited placement of cable video on the front page or the story pages linked off the cover. Linking to video from the Blue Site's story pages is further limited by the difference in news cycles between MSNBC's primetime programming and the daytime-focused Web cover. Nonetheless, players can appear in many places across the site and as such, the player itself is designed to be as flexible as possible in terms of its appearance and manner of display, thus maximizing the opportunities for video placement when they arise.

When and where video players do appear, video is kept rolling through the use of playlists, which are loaded and queued in accordance with the placement of the original video player. Like the organization of a news homepage, programming of playlists is itself a continual tension between automation, editorial control, and user preferences as these are perceived by the Web staff (Anderson, 2011). I've already gone on at length about the Website's attempt to meet the needs of different types of users. A further word may be necessary concerning tensions between automation and editorial control. In 2009, when I first conducted a pilot study involving interviews with developers and Web producers at the different broadcast networks, I found this phenomenon to be widespread. For example, a staffer at CBS Interactive had this to say about editing the front page of CBSNews.com:

There's a constant battle that we have, maybe because CBSNews.com doesn't have as strong an infrastructure as MSNBC, which obviously has a very powerful back end brought to it by Microsoft, and for instance, CNN.com, which obviously has got a ton of resources and has a 24-hour channel pushing to it constantly. ...[T]here's a constant battle on the backend side...of how to template a site so that you can be easily updated, and yet still be versatile enough to change the look depending on the content. We're constantly battling on, "When does something become a special section?" How do you make it special when you're trying to use a CMS that's based on templates, so that it's very easy to work with, but can be rigid in how it appears to the user on the site. So there's always that. That's pretty much a constant battle. And then you have the same thing with automation, where obviously you want to incorporate as much automation as possible because of limited resources. But how can you overtake that automation as easily as possible, so that you can customize your site, your page. On any given day you want to customize. You don't want just the last three videos that went into your system. You want to customize the best three. And do you populate that by most popular? But sometimes most popular isn't exactly the way you want to present your site. You know if it's "Man Eats Own Foot," and you've got three sub-stories on that, you probably don't want that to be the image of CBSNews.com, for your average user to come and say, "This is what CBSNews.com" is all about.

Much the same tension does in fact occur at MSNBC.com, at least with regard to publishing television video to the Web. All of the programming for the 24-hour MSNBC cable channel and NBC News is in fact handled by a small handful of Web producers. A single Web producer, for

instance, has primary responsibility for all the hourly shows between 11 a.m. and seven in the evening, while another handles the bulk of primetime. In this environment, automation can be an immense boon to productivity. Sam Go recounted that when MSNBC.com automated some of the processes that populated links on the cable microsite with fresh content, “it freed up three hours” in the schedule of the producer whose job it was to maintain the cable cover,

But it’s an ongoing debate in our newsroom. How much automation is too much? What becomes stupid? If you look at the bottom of our site [at another list of related stories appearing at the very bottom of the page], that’s all automated and you find most editors will say, “These topics don’t make sense,” or “Some of them are not really what’s interesting.” So there’s refining, I think, going on.

Similarly, Stokes Young, MSNBC.com’s director of multimedia, noted

We and our newsroom don’t want to get in the way of any automation that takes away repetitive motion or work that you can replace manual labor with technology. But we want to make damn sure that none of that automation presents too much editorial risk in terms of what our audience sees or perceives around our content.

These concerns about automation permeate editorial work at MSNBC.com, as well as other national news Websites, and they definitely apply to playlisting. Web staffers use automation wherever possible, to generate playlists for general news categories and data-driven clip queues like the “Most Viewed” playlist. They also use automation to duplicate video navigation links across MSNBC.com, such as when the latest clips of Lawrence O’Donnell’s program, *The Last Word*, are presented as a list of thumbnails and links on the show’s blog by way of an RSS feed, or when the latest clips of *Hardball* get linked to automatically on the MSNBC TV homepage.

This desire for show links to appear anywhere and everywhere an interested user might want to click on them is tempered, however, by a concern for editorial control—lest automation produce “stupid” or, worse, “risky” results—and by differences in editorial strategy across different parts of MSNBC.com. We can thus appreciate how the path of video threads a needle between this desire for automation and concerns about editorial control.

Cross-Platform Distribution

In addition to displaying on the Blue Site, video from MSNBC cable appears on a variety of other Internet platforms. When a program finishes airing, the video editor in Redmond, after cutting it into individual clips, also creates a clip of the complete show, replacing the live commercials with MSNBC.com ads and promos, then converts this clip to an m4v file format and size appropriate for podcasting. The final versions of these videos are saved to a special folder on the MSNBC.com server, and the podcast is automatically syndicated by the system to iTunes and Zune, as well as published to an RSS feed to allow podcasting to other third-party software and devices that don’t rely on either of the former. Many shows are also available as audio podcasts, and the process for publishing these is much the same.

MSNBC.com also makes its content, including video, available via a series of mobile Websites. In a smartphone, for example, users who load the URL, <http://msnbc.com> will see a version of the MSNBC.com cover optimized for mobile devices. The company relies on a third-party vendor called Transpera (recently acquired by Tremor Media; Rao, 2011) to take in RSS feeds of its various video playlists, then convert and syndicate this video in multiple formats tailored to a broad variety of mobile devices. The standard smartphone version of the

MSNBC.com cover consists of headlines and links for all of the Blue Site's top stories grouped by news category. Video thumbnails appear amid the various categories, as they would on the desktop site, but are also lumped into a "Video" category, placed toward the bottom of the page, which appears as a list of thumbnails populated from MSNBC.com's "Top Video" playlist.²⁵ Videos when selected play directly on the user's phone, though there is no specialized player for them in the sense of an interactive interface like that found on the MSNBC.com desktop site; rather, Transpera detects the type of device the site is loading in and serves up video that can be run in the phone or device's built-in player.

There is also a smartphone version of the MSNBC.com story pages, which often contains a "related video" section with a similar list of thumbnails for launching videos related to the story. Individual shows also get their own smartphone sites, consisting of a prominently featured list of video thumbnail links corresponding to the playlist from the program's MSNBC.com showfront. The mobile site for programs like the Ed Show, without a normal MSNBC.com showfront, instead feature a mobile version of the site's blog, in which any of MSNBC.com's embedded video players included in the various posts have been algorithmically replaced with thumbnail links that allow users to launch the desired video full-screen.

Additionally, there are also mobile versions of MSNBC.com's sites and pages formatted for tablet devices like the iPad. These pages are largely similar to their desktop Web counterparts, but the context-sensitive MSNBC.com video player, regardless of whether it appears on a story page, show front, or as a standalone window, appears in an iPad-friendly format—specifically a special touchscreen interface that resembles the desktop standalone

²⁵ As selected by the site's editors, as opposed to users.

player, but removes the list of available news categories in the sidebar, featuring only the current playlist. The playback interface is also simplified on the iPad, but contains a toggle allowing users to switch their streaming quality preference between WiFi and 3G, depending on how they're connecting to the Internet.

Beyond mobile Webpages, MSNBC.com has launched a range of television-related apps for smartphones, including a general MSNBC.com app, as well as individual show apps for the Rachel Maddow Show, Meet The Press, Nightly News, and the Today Show. The Today Show also has a separate Today Show Recipes app featuring its cooking segments. All but the Nightly News app and the Recipes app were assembled by Zumobi, a third party development company under contract with MSNBC.com, and like the mobile Websites, all rely on Transpera for delivery of video (Transpera, 2009). All were developed for the iPhone, but the MSNBC.com app has also been ported by Zumobi for Android phones (Zumobi, 2010a, 2010b). iPad apps have also been developed for The Rachel Maddow Show and The Today Show.²⁶ Finally, MSNBC.com recently created an iPad and iPhone app for a special event, the Royal Wedding app, which features videos, interactive image galleries, and factoids about English royal wedding traditions and was promoted in the lead-up to the 2011 nuptials of Prince William and Kate Middleton (Choney, 2011). The workings of these various mobile apps are diverse enough that it would be arcane to describe all of them in detail. For now it's enough to say that many contain lists of thumbnails for video segments available to be loaded, all of which are based on the aforementioned playlists related to specific shows and topics. Facebook and Twitter integration is another common feature of many of the apps, which will be touched on later.

²⁶ An Android port of the Maddow iPad app was also in development at the time of my fieldwork in Seattle in September, 2010.

Pressures on Cross-Platform Distribution

At the 2011 consumer electronics show, MSNBC.com president Charles Tillinghast had this to say to industry observer site Beet.TV:

I think that its [mobile audiences'] value is not only in the higher engagement, but you're also reaching segments that may not be watching TV, or may not be watching our kind of content—news—on TV. So younger audiences, you consume mobile content in far greater proportion than older audiences. So mobile offers an opportunity to expand the opportunity for news products that are already reaching certain segments on TV. So it's not so much that mobile is better than TV or desktop is better than mobile, or anything like that. It's really being able to reach every possible user on the device of their choice.

(Plesser, 2011a)

Mobile devices are thus a potential resource for MSNBC TV and MSNBC.com in that they offer potential to grow consumption and brand affinity by reaching prospective audiences—and especially *additional* audiences—wherever they might be, on whatever device they choose.²⁷

Many news organizations have seen a similar promise in mobile technology, but there is as yet relatively little scholarship on how news organizations are creating distribution channels to mobile devices. What literature does exist has primarily focused on mobile technology's use in news *gathering*, mobile technology as a means of news consumption by audiences, or its use by citizen journalists to bypass the publishing bottleneck of traditional news organizations (Gordon, 2007; Goggin, 2011). But as with elsewhere in the journalism studies literature, initial

²⁷ Much the same rhetoric has accompanied other new technological platforms. A particularly good example is that of the American broadcast news networks in their turn to blogging in 2005 (see, for example, Lafayette, 2005; Squires, 2005; Steinberg, 2005).

examinations of mobile devices have tended to neglect the actual mechanics by which news is made available. Goggin (2011) very recently examined mobile technologies as distribution platforms, but focused primarily on cataloguing and describing the growing number of mobile interfaces through which users can access news—SMS, mobile apps, mobile browsers, and so forth—as a sort of proof of concept that mobile is a ripe topic for study. What I would like to add to this catalogue of availability is a description of how these distribution channels are *forged* by a company like MSNBC.com. In the process, we'll discover a growing and largely unstudied field of intermediaries lashed together by MSNBC.com and other large media organizations to thread a needle between the diverse pressures imposed by a rapidly changing distribution environment.

As early as 2001, MSNBC.com contracted with Roamable Corp., a company that generated email updates and text messages from database queries, to offer users the ability to receive headlines, weather, sports scores, and other free updates by sending a blank email or text message to any of a list of email addresses (e.g., sports@msnbc.com) corresponding to their information request (Marlowe, 2001; MSNBC.com, 2001). MSNBC.com continued to aggressively potential customers on the go, subsequently signing deals with additional syndication companies, including Skytel, i3, and others to bring the site's headlines and stories to devices ranging from cell phones to bank ATMs ("Wireless Content Deals Keep Coming," 2000). The specifics of these early agreements are beyond the scope of this manuscript, however, it's worth noting that MSNBC.com took on many such ventures before they would actually generate ad revenue in hopes of becoming competitive through early entry into these markets ("Wireless Content Deals Keep Coming," 2000).

MSNBC.com's efforts at cross-platform distribution of television programming began around 2004 when access to the cable channel was sold as part of a package by MobiTV, a company that streamed live cable channels to subscribers' cell phones. Available only on Sprint's cellular network, the service reflected the limited technology and bandwidth available at the time, streaming video at a glacial rate of one to two frames per second and rapidly draining customers' cell phone batteries (Langberg, 2004a, 2004b). In 2005, Microsoft began offering a subscription service that allowed television clips, including video headlines from MSNBC TV, to be synced from a computer to devices running Microsoft's Windows Mobile operating system. Soon after, MSNBC.com began distributing clips of popular shows like *Hardball*, *Countdown*, and NBC's *Today* in the form of podcasts, and eventually offered full episodes through iTunes, Zune, and RSS (Gough, 2005; Tofel, 2007).

MSNBC.com was able to lash together all these distributors, their technological resources, and access to audiences into a working system for piping video content to consumers on the go. Still, these forms of distribution were limited in their reach—by the terms of individual syndication deals, by distributors' exclusive agreements with particular cellular carriers or device manufacturers, by the limits on mobile bandwidth and the capabilities of the devices on the market at the time, and finally, by the proprietary compatibility restrictions imposed by hardware and software providers like Apple, and Microsoft itself. All of these things were simultaneously enabling and shaping the path of video from MSNBC.com, but also restricting it. The same could be said of the expectations of customers, who might anticipate an audio podcast of their favorite show, but who were far less likely in 2004 to demand live

television on their cell phones—an idea one columnist at the time dubbed the “wireless equivalent of a stupid pet trick” (Langberg, 2004a).

Meanwhile, the Web was MSNBC.com’s native medium, and it also offered a potential cross-platform solution for reaching a broad variety of phones and mobile devices. However, by 2006 only around one percent of visitors were accessing MSNBC.com via phone browsers (Noguchi, 2006). In response, the company decided to create a mobile interface for its Website—one it hoped would ultimately allow visitors to not only read stories and look at photographs, but view video as well. It launched a mobile version of its regular Website (Bournique, 2006). Unfortunately, many mobile browsers were limited in their display capabilities, restricting what Web developers could accomplish, and ruling out video as an option on a normal mobile site. To get around these problems, MSNBC.com also contracted with a company called Action Engine, which designed mobile phone applications using a custom rendering engine superior to that on most phone browsers of the time, to create a portal application for MSNBC.com (“MSNBC Goes Mobile With News,” 2006; Noguchi, 2006).

Cost to consumers was another pressure the company recognized as standing in the way of mobile Web traffic. In 2006, most multimedia content was delivered to phones through media subscription services like MobiTV or VCast, for which customers paid hefty fees over and above what they were paying for their basic cellular service and an accompanying data plan (Noguchi, 2006). At the time, 28 percent of mobile phones on the market were capable of displaying video, but only one percent of customers actually utilized video services (“MSNBC Goes Mobile With News,” 2006). In response, Catherine Captain, MSNBC.com’s senior vice president of marketing told the *Washington Post* that the company planned to subsidize mobile streaming

with advertising and offer MSNBC video content for free to cellular customers (Noguchi, 2006). The Action Engine-powered service launched in beta in April of 2006, available initially only for Windows Mobile phones, though support for other devices was planned (Action Engine, 2008; “MSNBC Goes Mobile With News,” 2006).

In 2008, the Action Engine startup dissolved (Duryee, 2008), however, in the interim, mobile browser technology had improved substantially with the rise in popularity of smartphones like Apple’s iPhone, making MSNBC.com’s “ordinary” mobile Website substantially more popular. Soon after, in 2009, video was added to MSNBC.com’s mobile site, including both breaking news clips, and “branded video destinations for ‘Today,’ ‘NBC Nightly News with Brian Williams,’ ‘Meet the Press,’ ‘Dateline,’ ‘Countdown with Keith Olbermann,’ and ‘The Rachel Maddow Show’” (Transpera, 2009). Despite the development of more advanced phone browsers capable of rendering sophisticated Webpages, however, there are still today numerous discrepancies in the display dimensions of mobile phones, as well as the video formats they are capable of rendering.²⁸ For this reason, MSNBC.com made a deal with a company called Transpera, much as it had with Action Engine several years before, to help them circumnavigate the lack of standardization in the mobile phone market. Transpera is an intermediary company that takes in a feed of videos from a publisher, converts the videos into a range of formats appropriate for display on a wide variety of mobile devices, and finally streams the video in the appropriate format to users based on the device they happen to be loading it in (Roizen, 2008). Transpera thus allows MSNBC.com and other content providers to thread a needle between the increasing opportunity and pressure to compete in the mobile marketplace on the one hand, and

²⁸ In particular, Apple has, for the last several years publicly refused to support Adobe’s Flash video standard on iOS devices, like the iPhone, iPad, and iPod Touch (Jobs, 2010).

the recalcitrant technical requirements of the phones and devices that enable this market in the first place. Transpera further threads a needle by offsetting the cost to the publisher of distributing mobile video—it generates revenue for the publisher, and for itself, by packaging clips with video advertising on their way to the user. As of 2009, when it began publishing MSNBC video to mobile devices, Transpera ran the “largest mobile video delivery and advertising network in North America,” and distributed mobile video not only for MSNBC, but also for CBS News, The Weather Channel, AccuWeather, MTV, and Disney among others (Plesser, 2009a).²⁹

Video quickly became a popular addition to the mobile site, with viewing through the mobile Web interface climbing 207% over the course the first four months of its availability (as measured against the first monthly figure from March, 2009; “MSNBC Mobile Views,” 2009). Finally, in 2010, the mobile cover and show fronts were redesigned to more closely mimic the feel of the desktop Websites. One of the designers who worked on the mobile redesign, Vu Nguyen (2010) recounts on his blog,

On the desktop site, we list photos and videos along with articles in the same slice.³⁰ We wanted to carry that functionality over to the mobile site as well. Photo and video stories are listed along with the rest of the content inside each slice. That way multimedia stories don’t feel that separated and special. They are just part of the experience. Of course, we still have the dedicated video and photo sections like we have on our desktop site.

²⁹ It’s worth noting Transpera’s (now part of Tremor Media) long term business strategy here. Mobile devices may eventually converge on a video standard—or grow support for more sorts of video. But now that Transpera—or rather, Tremor—controls this extensive ad network, it hopes to still have a valuable point of leverage in this market going forward (Roizen, 2008).

³⁰ “Slices” are MSNBC.com’s term for modular components of pages. In this instance, Nguyen is referring to news categories, like health, sports, or politics.

It's worth noting that while MSNBC.com continues to exist in some form for low-end phone browsers, this redesign only applies to—and can only be taken advantage of by—smartphone users, and specifically those whose phones use Webkit³¹ browsers, including the iPhone, the Palm Pre and Android-powered devices. Of course, the technical limitations of lower-end browsers would likely have been difficult to support, and smartphone users also have more expendable income to lure advertisers. As in many news and media markets, this is an example of an area where the size of a potential audience rubs up against audience valuation (Schudson, 2003). MSNBC.com product manager Jeff Maurone explained the situation this way in *AdWeek*:

The target audience is consumers who purchase cutting-edge smartphones. “They’re self-selecting into being passionate about content [delivered] via their devices,” said

Maurone. Though iPhone users make up a small portion of MSNBC's mobile audience, they’re also the ones who are engaged and “spending far more time on our site than [someone with] a Nokia or lower-end phone,” Maurone added. (Wong, 2010)

We can see, then, how the company has dealt with the recalcitrance of the “mobile” category by segmenting the market and selectively expending resources on a lucrative subset of the potential audience, the proxy for which—also a kludge—is choice of device.

³¹ For less technical readers, Webkit is a layout engine—a component of a Web browser that controls how Webpages are displayed. Different browsers use different layout engines. For instance, on your desktop computer, Google Chrome and Apple Safari browsers use Webkit, Mozilla Firefox uses a layout engine called Gecko, Microsoft Internet Explorer employs another called Trident, and the Opera browser uses one called Presto. Phone browsers similarly employ one or another layout engine to render Webpages. Differences between layout engines and the way they interpret Web standards—and therefore display pages—lead to much wailing and gnashing of teeth among Web developers, who must write pages that will display correctly in all of them. The choice, then, to develop MSNBC.com’s mobile sites for a single layout engine thus reduced the resources necessary to develop a working mobile site, while ensuring that the site would still work on the most popular phones and mobile devices (since these generally use Webkit). In that regard, it’s a way of threading a needle between opposing pressures. It does, however, have the side effect that some mobile browsers and phones will not work with some MSNBC.com mobile sites. An example is that MSNBC.com show fronts do not detect when they are being loaded in an Opera mobile browser. As a result, the device will attempt to load the desktop video player. On a phone that does not support Flash, this results in a largely non-functional page.

Meanwhile, on tablets like the iPad, the desktop Website could be, and is, displayed in nearly its original form, though adjustments were required to support differences in functionality between a touchscreen and a mouse interface (for instance, there is presently no way to “hover” over a menu item using a touchscreen), as well as to compensate for lack of Flash support on devices like the iPad. Moreover, as the functionality of mobile devices increasingly is able to mirror that of the desktop Website, the mobile Web is becoming an increasingly popular means of accessing video, beyond even specialized mobile applications. Charles Tillinghast, president of MSNBC.com described the situation to the industry observer site, Beet.TV recently:

The tablet is a fantastic device for video consumption, but what we’re seeing is that HTML5 video is being consumed in far greater proportion than video via apps. So HTML5, meaning the ability to access our Website directly and have it optimized for the device is very popular. And many sites, of course, have the Flash barrier when it comes to the iPad. We don’t have that barrier and our site can automatically detect that you’re coming from an iPad and then serve you up an HTML5 encoded video, so that it plays seamlessly. The video is expandable, so you can just take your fingers and expand it to full screen. So you have all the functionality of the iPad with our site. And you don’t have to have an app. Our goal with our site is to make the experience every bit as good as an app. So if people feel like they have to get an app in order to have an optimized experience, we’re going to make that not necessary going forward. And I would offer that our site already does that. (Plesser, 2011a)

MSNBC.com, however, continues to actively support the development of mobile applications, particularly for the iPhone and iPad, though as the Android market has grown there are signs that

it is beginning to focus attention there as well.³² And all of the television-related apps are able to play video from MSNBC shows. However, while the shows' mobile Websites are often highly modular—when Nguyen (Nguyen, 2010) described the mobile show fronts for Today, Nightly News, and Dateline on his blog he noted “the only thing that is different between these pages is a few CSS overrides”³³—MSNBC.com show apps are often tailored very specifically to the program for which they're designed and its audience (Plessner, 2010). For instance, The Today Show's primary demographic of women, 25 to 34, consumes a particularly large amount of Web video.³⁴ This is reflected in the Today iPhone app, which predominantly features clips from the show, grouped into a wide variety of categories. The Rachel Maddow Show, on the other hand, has one of the most social media-savvy fan bases of any MSNBC cable show, and its iPhone app caters to this, aggregating feeds from Twitter, Flickr, Wikiquote, and Newsvine (Butcher, 2009; Plessner, 2011e). The app contains a playlist for watching the show, but it is one among many options on the application's main navigation interface. The manner in which apps are designed with distinctive show audiences and editorial workflows in mind will be touched on in further detail in a later chapter. Once again, video in mobile apps threads a needle by going through Transpera, with its built-in ad revenue stream and its ability to customize video by device.

Moreover, presumably because of their idiosyncratic and one-off nature, the construction of

³² As I mention above, in addition to an Android version of the MSNBC.com app, there is work being done on an Android port of the Rachel Maddow iPod app. An Android version of the Royal Wedding app was also announced, but apparently not delivered in time for the wedding itself (see Choney, 2011, as well as the comments that follow the post).

³³ For less technical readers, CSS stands for “cascading stylesheet.” CSS stylesheets are sets of instructions directed at Web browsers that change the look and feel of a Webpage without altering any of its structure. A CSS override is the replacement of a few instructions in a standard style to distinguish one page from another. In other words CSS and an initial modular design allowed the designers to create mobile show fronts for different programs without too much heavy lifting.

³⁴ This marketing research was described in my interviews with MSNBC.com president Charlie Tillinghast, Today.com editorial supervisor Sarika Dani, and Today.com director Jennifer Brown

many of the apps has been outsourced to a third-party company, mobile application designer Zumobi, though more recently MSNBC.com has begun to build some mobile applications in-house.

MSNBC.com might like to reach every user everywhere, but accessing MSNBC cable video isn't possible for any user on just any device. Rather, its selective path to some audiences and some of their gadgets is influenced heavily by market considerations—the sort of audiences MSNBC.com needs to turn a profit; how much users can, or are are willing to pay for access; which audiences ultimately choose to pay; the availability of advertisers to subsidize these costs to end users; and which users advertisers themselves are interested in. We also see how the path that's traced out as video wends its way to our phones threads its way around various technical limitations, some imposed by device and software manufacturers, others a product of ongoing technological development. The route between these obstacles is equally influenced by the various deals and alliances MSNBC.com is able to lash together among intermediaries like Action Engine, Transpera, or MobiTV, and the various players—advertisers, cellular carriers, and so forth—with which those companies in turn deal. Choices are also made at each juncture about which browsers, operating systems, devices, and consumer media software are worth developing for and interoperating with. The path that puts video in our pocket bears the impression of heterogeneous actors from the W3C, the consortium that develops Web standards, to PepsiCo, which sells advertisements through Transpera, to the regional zoning commissions that have edged forward the mobile broadband market by voting on the installation of new cell towers.

The path is also precarious. Not only is the assemblage of actors and relationships described above in continual flux, much of television we watch for free on the Web and on our mobile devices is, for the moment, there at the pleasure of cable providers, from whom cable channels get a large portion of their revenue, and whose protestations have made many content providers reticent about putting shows online for free. The following comes from a recent exchange between online video trade journalist Peter Kafka and Mark Marvel, senior director of video at MSNBC.com:

PK: And when you put that show up for free on the iPad that your MSOs are paying you for access to, what do you think their reaction is going to be?

MM: I think one of the things is you're testing a new market. That's a challenge for us every day, right? I mean, the fact is, when our stuff is embedded and put on another site or what have you, it's always a challenge when you're looking at the economics, but the fact is that this is going to be testing a new market that probably will be very significant. I wouldn't be surprised if we hear some pushback from them, but my guess is that it's going to take a little bit for this market to get going. But it's going to be big. (Plesser, 2010)

This quote could be read as suggesting that cable providers' "pushback" is less relevant to MSNBC.com than the opening of new markets, and that may be company's interim position. As is the case with many Web companies affiliated with television networks and channels, Web video provides MSNBC.com with some opportunity to profit by disintermediating cable providers, at least when it comes to on-demand content. However, Marvel's politick language in discussing the matter is no doubt due to the recognition that cable providers still have a major

interest in online video distribution and some big cards to play. For one, online distribution brings in modest revenues compared to cable distribution. For example, Viacom earns as much as \$2 billion every quarter in television revenue (James, 2011), while Hulu, which carries content from multiple networks and cable channels, earned \$260 million in revenue over the course of all of 2010 (Lawler, 2011a), which it split across all its corporate owners. This inequity, for the time being, is apt to make content providers much more attentive to the needs of their traditional distributors, including the cable providers, than to their online distribution partners. What's more, cable providers may assert contractual rights in the matter, to the effect that the privilege they pay for, to distribute premium television content, extends to online distribution. And in fact, they are already doing so with regard to live television programming—in April 2011 Time Warner Cable went to court, seeking a declaratory judgment as to whether cable companies can deliver live TV to the iPad and other tablets (Lawler, 2011b).³⁵ In other words, MSNBC.com is free to test the waters when it comes to providing time-delayed video on the iPad, which the various parties agree for the moment falls into a different distribution “window,” than live programming. But the ground is shifting quickly, and as traditional cable providers develop their own online distribution strategies, they may begin applying tremendous pressure, both legal and financial, to limit the ability of clients like MSNBC to become competitors by way of their own online operations. In other words, the cable providers, too, are engaged in aggressive heterogeneous engineering.

³⁵ It's worth noting that Viacom simultaneously sought a declaratory judgment on the same matter (Lawler, 2011a).

Video Syndication and Embedding

One of the premises of the conversation economy and network journalism is that digital distribution of media depends not only—and perhaps not even primarily—on what happens on a news site itself. We’ve already begun to see MSNBC.com’s efforts to reach users wherever they are in physical space by piping its offerings to cell phones, iPads, media players, and ATMs. Related, and equally important to the developing picture, are efforts to reach users elsewhere on the Web. But in tracing out this part of our developing *volta*, we’ll begin to see that the boundaries between “on-site” and “off-site” distribution are frequently not as clear cut from a heterogeneous engineering perspective as they might at first appear. We’ve already seen how a single Web domain like MSNBC.com can consist of multiple sites and “micro-sites.” Moreover, we’ll soon see how a single site may run on multiple publishing platforms and technological infrastructures, while technologies ostensibly designed for off-site distribution can become essential tools for on-site publishing. As such, I’d like to avoid using “on-site” and “off-site” as preformed analytical categories. It’s with this blurring of boundaries in mind that I wish to discuss video syndication and embedding. To begin, I’ll return to the point in the path where we left off earlier.

Online Video Syndication

Recall that MSNBC is part of Microsoft’s MSN network, which still exists in the form of a family of Websites. When a video is entered into MSNBC.com’s CMS, by default it gets syndicated to all of these other Websites, posting automatically in some places, and in others

becoming available for the respective editorial staffs to add to their offerings.³⁶ Videos are also syndicated automatically to Microsoft's Bing video portal, where they are featured prominently as the site's main source of news video (see Fig. 2.5).

³⁶ Whether and how such cross-linking might be mandated by Microsoft beyond the standard header and footer links included in page designs is a relevant, but obviously a touchy subject. As such it's an area where I have neither firsthand knowledge, nor firm documentary evidence. Without passing entirely into the realm of conjecture, there's limited visual evidence to the effect that different MSN sites may be obligated to include one another's content. MSNBC.com itself, for instance, houses links to MSN's Powerwall and Wonderwall gossip sites, which are run on very different editorial strategies than the Blue Site. It's also worth noting that these links are carefully tucked away in inconspicuous places on MSNBC.com's front page. This sort of mandated cross-linking, if or where it occurs, would be a resource in distribution terms, in the sense that it would drive additional traffic to MSNBC.com, but it's also easy to imagine Blue Site editors threading a needle in the way they reciprocated—including links to other sites as required, but finding ways to make them inconspicuous so as not to dilute the editorial image of their own site.

Web Images Videos Shopping News Maps More | MSN Hotmail
Sign in Rewards Meriden, Connecticut Preferences

bing

Videos
Top Videos TV Music Movies News Sports Comedy Viral More
My Playlist (0)

News Home U.S. News World News Weird News TODAY Nightly News Local News Local Weather

© Nasser Nasser/AP Images

Rare look inside Egyptian pyramids

July 16: Egypt's minister of antiquities, Zahi Hawas, gives NBC's Richard Engel a rare tour inside a five-mile complex of tunnels deep beneath the 5000-year-old Saqqara plateau.

Watch now

Rare look inside Egyptian pyramids

Search on for missing mom of triplets

Casey Anthony to leave jail

Obama denies reports of blowups in budget talks

Los Angeles residents brace for 'Carnageddon'

Today	Nightly News	Rachel Maddow	Hardball	Jansing and Co.	MSNBC.com
-------	--------------	---------------	----------	-----------------	-----------

GOP vote suppression effort could stave off
22 hrs ago 16:22

News Corp plinth threatened as scandal
22 hrs ago 11:44

GOP goes to war against clean water
22 hrs ago 6:42

Tiller, McVeigh documentaries to air on
22 hrs ago 0:35

Cyclists show disdain for the reign of the plane
22 hrs ago 3:34

The Rickey named D.C.'s official drink
22 hrs ago 3:22

1 of 306

Dateline NBC	Meet the Press	Way Too Early	ZeitGeist	Morning Joe	The Daily Rundown
--------------	----------------	---------------	-----------	-------------	-------------------

'Deadly Game', Part 1
20 hrs ago 8:06

'Deadly Game', Part 2
20 hrs ago 5:04

'Deadly Game', Part 3
20 hrs ago 5:46

'Deadly Game', Part 4
20 hrs ago 5:22

'Deadly Game', Part 5
20 hrs ago 7:15

'Deadly Game', Part 6
20 hrs ago 8:54

1 of 301

ABC News	Associated Press	CBS News	CNN	FOX News	MSNBC
----------	------------------	----------	-----	----------	-------

Best 'GMA' Weekend Moments: Hired for the
9/4/09 3:23

Obama Weekly Address: 'Neither Party'
18 hrs ago 4:08

Horrific Accident Crushes Minivan, Man
18 hrs ago 2:00

Brooklyn Boy Murder: Community Man Key in
18 hrs ago 0:44

Beyonce Wakes Up Space Station Crew
18 hrs ago 0:36

Your Three Words: 'Lost in My Mind'
18 hrs ago 2:34

1 of 167

Figure 2.5 // The Bing Video news page is dominated by MSNBC TV and NBC News content

95

Clips and full episodes of several NBC News broadcast programs, including Meet the Press and Nightly News are also syndicated to Hulu. Hulu additionally maintains several topical “channels” featuring content from NBC News and (to a lesser extent) MSNBC cable, including one MSNBC branded channel called “The Obama Administration,” and another, “Decision 2010,” featuring coverage of the 2010 midterm elections. Syndication of all these clips, to Microsoft properties and to Hulu, is automated. When a video editor, or any other person entering a video into MSNBC.com’s CMS inputs the metadata for a clip, the categories they choose for the clip include ones that, when selected, automatically feed the video out to these other outlets. When viewed on another site, like an MSN page or Bing, clips appear in MSN’s video player, rather than MSNBC.com’s. Clips on Hulu likewise appear in Hulu’s video player.

Pressures on Video Syndication

By syndicating video to properties in Microsoft’s online services division, like Bing and MSN, MSNBC.com dramatically increases its reach. Bing, for instance, is the official Web search provider for Facebook and for Blackberry smartphones (Paterno, 2011; Segan, 2011). MSN.com is the default homepage for the Internet Explorer browser (Nayyar, 2011), and the site not only features MSNBC video, but also includes a Bing search bar and links to other MSN sites, which also feature MSNBC video. Internet users may now encounter video from MSNBC cable and NBC News not just on the Blue Site, but across a wide swathe of Microsoft-owned and partnered sites across the Internet. As measured by comScore, which groups Microsoft’s various Web properties into a single entity, this network of sites consistently places the company among the top ten online video providers, competing nimbly with—and often surpassing—giants like AOL,

Viacom Digital, Tremor Media, and Hulu (Trout, 2011). What's more, as we've seen, MSNBC cable and NBC News video is *available* through some of these competitors. As Stokes Young, MSNBC.com's director of multimedia notes, some of these arrangements appear more natural than others to the system builders involved:

JB: I know a lot of your video goes out to Bing and MSN and Hulu and all these other places. And I know you have some control over which of it goes where. How do you make decisions like that about how to syndicate what videos to which services?

SY: Well, I would say that it varies from partner to partner. I would say that's particularly true in the case of Bing Video. Bing Video, formerly MSN Video—I mean, MSNBC.com is a founding partner of MSN video. So we had sort of a lot of staff overlap. I've worked there before. Other people on the video team at MSNBC.com have worked there before. There are people who work on that team who used to work at MSNBC. And, of course, we're half owned by Microsoft. And we're the exclusive news provider to MSN. So we syndicate our stuff to Bing. Right? I mean that's a natural thing. I don't think there's any negotiation—that's just what we do. When it comes to syndication of content to other folks, that's essentially a business decision. And it's made just based on the fact of whether we think syndication there will yield not only a good audience and some economic return, but also that it's not overly threatening in any way to what our core business is. But, as you've noticed we're always willing to syndicate certain parts of our content. But we've never wanted to treat NBC News video content as a commodity, because it's not. It's something that's a very rare asset. And so we treat it that way.

In conceptualizing the flow of online video as a *volta*, we can recognize that automated syndication represents a set of decisions, at some point, about an appropriate flow of content, which is ultimately inscribed on the map. Young's quote puts on display the numerous concerns that impress themselves on this path. Bing is a "natural" outlet owing to the shared ownership, staff, branding, and resources of MSN and MSNBC.com. Elsewhere, online video syndication is weighed carefully on a case-by-case basis in a manner that threads a number of important needles. Paths are forged based on the potential of a venue to capture valuable audiences and their associated advertising dollars, but they must avoid giving too much fuel to sites that could potentially become competition. And while the temptation might exist to syndicate to every available platform, the company is cognizant that "commoditizing" NBC News and MSNBC products through rampant cross-promotion across platforms could damage the value of its brand by tearing down the image of the news division as being financially disinterested (For an example of the sort of reaction MSNBC.com is trying to avoid, see Fig. 2.6). Of course, over-promotion is a risk that MSNBC.com may run even within the MSN network, meaning that they must balance it against the corporate and human resource ties that otherwise make Bing Video a natural fit. Syndication, in other words, involves the drawing together and managing of many heterogeneous resources, as well as the management of the pressures they exert on the system

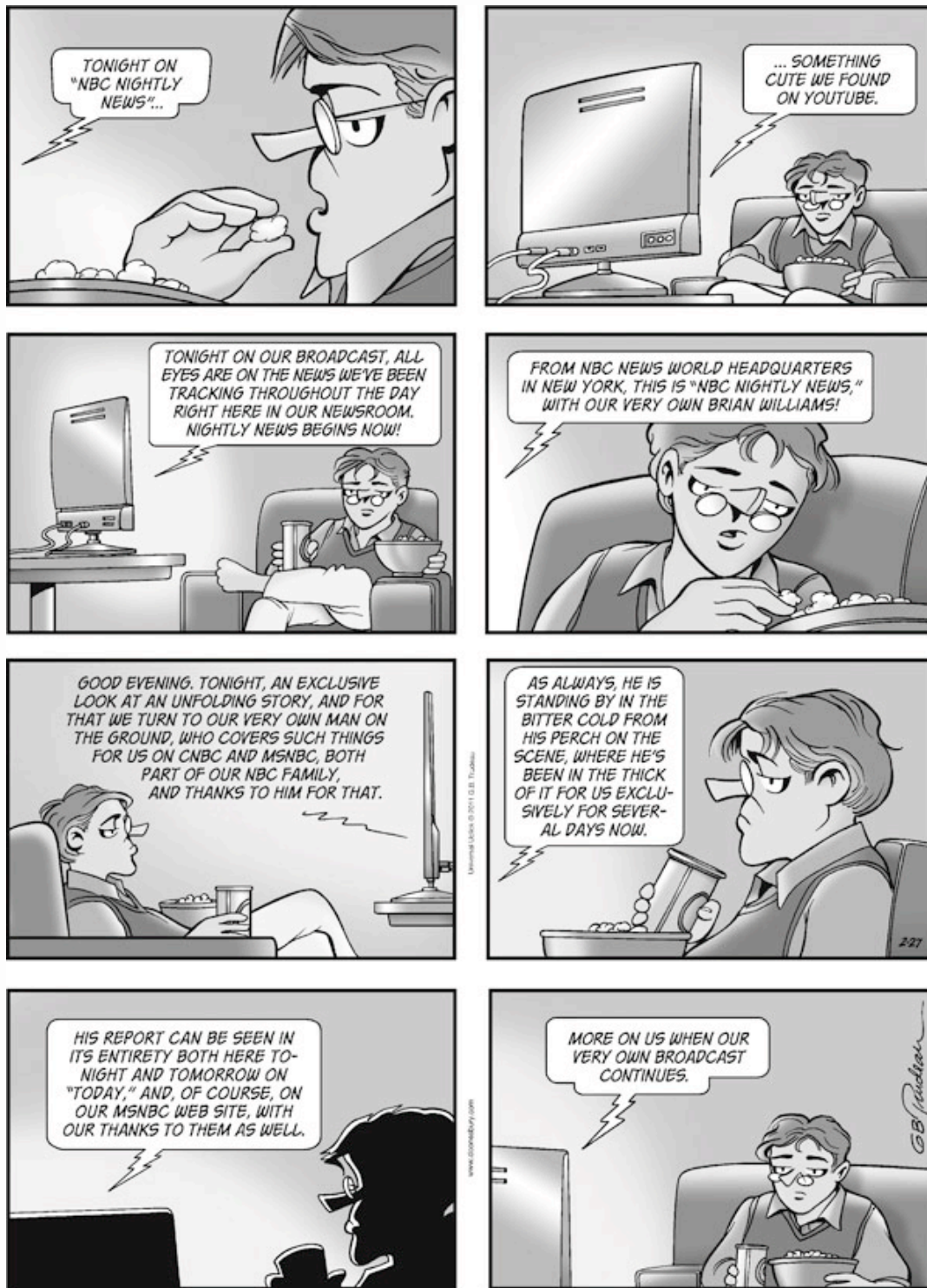


Figure 2.6 // *Doonesbury* from February 27, 2011

Cartoonist Gary Trudeau has parodied the extent of NBC's cross promotional activities around the news. (Image Source: Universal UClick)

Despite the comfortable fit between Bing and MSN on the one hand and MSNBC.com on the other, it's notable that the former make use of a different video player than MSNBC.com. At one point, MSNBC.com did employ the MSN video player. However, previous versions of that player were, by some accounts, not user-friendly or reliable, and came to be seen by MSNBC.com as a liability in a market for news video where user experience was increasingly viewed as a differentiator. Randy Stearns, who formerly worked at ABCNews.com and is currently the East Coast deputy editor for MSNBC.com, was involved with the project to develop the initial version of MSNBC.com's current player and recalls:

Shortly after I joined the company, we got permission to go off and build our own video player. And that was really one of the key things, is once we built our own player to our own specs to do the things we wanted—number one of which was just play video (seems pretty straightforward)—that changed everything. ... Andrew Locke...was the guy who led the team, which was the first really big, successful cross-functional team in our company. So it involved me and Stokes [Young] on the editorial side, a lot of developers, some marketing people, sales people, product managers—you know, the whole range of people. It met a couple times a week to sort of figure this out. He [Locke] laid out the charter. There were maybe three points; like, “Our goals are to create a video player that plays video, and that (2) plays video all the time, and (3) plays video that can be monetized.” That's all it was. Everything else was completely tertiary. We just needed to get that requirement so that we could deliver video and get it to play consistently. And from that basis, then we built up a lot of other, fancier things around it. But that was the charter was just something as basic as that. Because we were in an environment at that

time where there was this unsatisfactory legacy video player—which a few years earlier had actually been state of the art—we needed to get back to those basics. ABC News, before I left, had started development on a video experience that was actually quite a bit better than what MSNBC.com had at that time. So there was a competitive factor as other players came to the market with reliable, feature rich video experiences. And then you have Brightcove and a few others that have these third-party players—Brightcove was the one I liked the best, but the business deals around that were tricky—that were doing a pretty good job of playing video, but not great. And so it was just like, “This needs to be like television. You need to turn it on and have it play, and not think about whether, you know, the rabbit ears are adjusted right or whether, you know, you’re using the right version of a browser for this particular [clip].” If the consumer has to think about that stuff, those things, you’ve lost them, right? So it was really, basically just make sure that we can catalogue, search, and deliver the video that people want. And that was really it.

The contemporary MSN player does offer a similar “turn it on and have it play” experience to users. But the development of the MSNBC.com and MSN/Bing players has remained independent in the interim, an instance where the consequences of design have lasting impacts as many systems begin to enroll and depend on the same object. In Stearns’ description of the development of the MSNBC.com player, we can see the competitive environment into which the player was to be deployed and how this affected decision-making about the player’s functionality. We also discover how its evolution was partly a response to existing artifacts, like Brightcove’s video solution, and how marketplace and contractual legal concerns turned

Brightcove from a potential partner to a potential competitor in the online video space. Finally, we see the socially constructed aspects of technological development (Kline & Pinch, 1996; Pinch & Bijker, 1984)—how the player ultimately bore the imprint of many different constituencies *within* MSNBC.com, both indicating the heterogeneity of the actors involved in the development of the artifact and reminding us that large media organizations like MSNBC.com are not as monolithic as they may appear from the outside. At the same time, it's a lesson in how technologies become *more* monolithic—the construction of the original MSNBC.com video player involved the gathering of teams from across the company, a successful kludging together of talent and input from many corners. At the same time, once the player had been enrolled in the systems of these many teams, it became an artifact threading the needle between all their diverse interests—overdetermined, as it were, by the needs of myriad system builders. These are themes that will be further explored in the coming chapters.

MSNBC.com's relationship with Hulu similarly underscores the diversity contained within large media companies. The following exchange between industry observer site PaidContent.org's Rafat Ali and MSNBC.com's Charlie Tillinghast suggests, for instance that MSNBC.com tends to view Hulu with some ambivalence:

RA: And some of your video is ending up on Hulu now, as well. News video.

CT: Yeah, we have a deal with Hulu where we do provide a limited amount of video that can play on Hulu. It hasn't really done a lot.

RA: It's not known as a news video medium per se, Hulu.

CT: Right. It's not. And it's fine with me if it stays that way. [grins]

RA: Well, you guys own some of it.

CT: Well, our parent [NBC Universal] owns some of it. (Plesser, 2009b)

Hulu has been enrolled into the collection of distribution resources lashed together by MSNBC.com. At the same time, MSNBC.com would no doubt rather viewers watch the same content through its own player, rather than going through an intermediary who takes a cut of the revenue. This is especially true given that MSNBC.com has begun developing advertising packages to sell against long-form content in its own player—long-form online video is an advertising market that Hulu normally excels in (Whitney, 2010). This mixture of competition and traffic sharing—the balance that Young also referred to in the passage above—in the relationships between online companies is a common theme in online distribution that will crop up again in our discussion.

Embeddable Video

Like YouTube, Vimeo, and many other Web video providers, MSNBC.com has created a video player that can be embedded by users on their own Websites. While the MSNBC.com domain itself serves approximately 200 million video streams per month, the site's embedded players around the Web serve up an additional 10 to 20 million streams every four weeks on average, making embeds one of the primary means by which MSNBC cable's video content gets circulated online (Plesser, 2011c). The process of embedding a video goes generally as follows. When users play a video on MSNBC.com, they can click a "clip & share" button on the player, after which the video is paused and a lightbox appears within the player with prominent buttons that allow users to share a link to the clip by email, Facebook, or Twitter, or to embed the clip (Figure 2.7). Clicking the "Embed" button automatically copies an embed code for the entire

clip to the clipboard of the user's computer, which can then be pasted into the HTML source of any blog or Webpage to display the corresponding clip. Alternatively, she can click a link appearing below the aforementioned buttons labeled "share your own subclip from this video." Clicking this link brings up a new interface in place of the original player, that includes a miniature version of the video, as well as a transcript of the clip in a left sidebar and a scrubber bar (e.g., a timeline bar of the video). Users can highlight a portion of the transcript with their mouse or adjust the "in" and "out" points on the scrubber bar to select a portion of the original clip that they'd like to share on its own (Figure 2.8). Once the user has completed this selection, she can then click an email, Facebook, or Twitter icon at the bottom of the interface to share the subclip via one of these media, or copy the new embed code for the subclip appearing at the bottom of the screen. The dimensions of the player can also be adjusted prior to selecting the embed code. Users encountering an embedded video on the Web can click a "share" button on the embedded player to copy the basic embed code, or send the clip via email, Facebook, or Twitter. There is also a link in embedded players to "create subclip[s]," which when clicked opens the video on MSNBC.com itself, where users can use the more advanced embedding interface described above and featured in Figure 2.8.

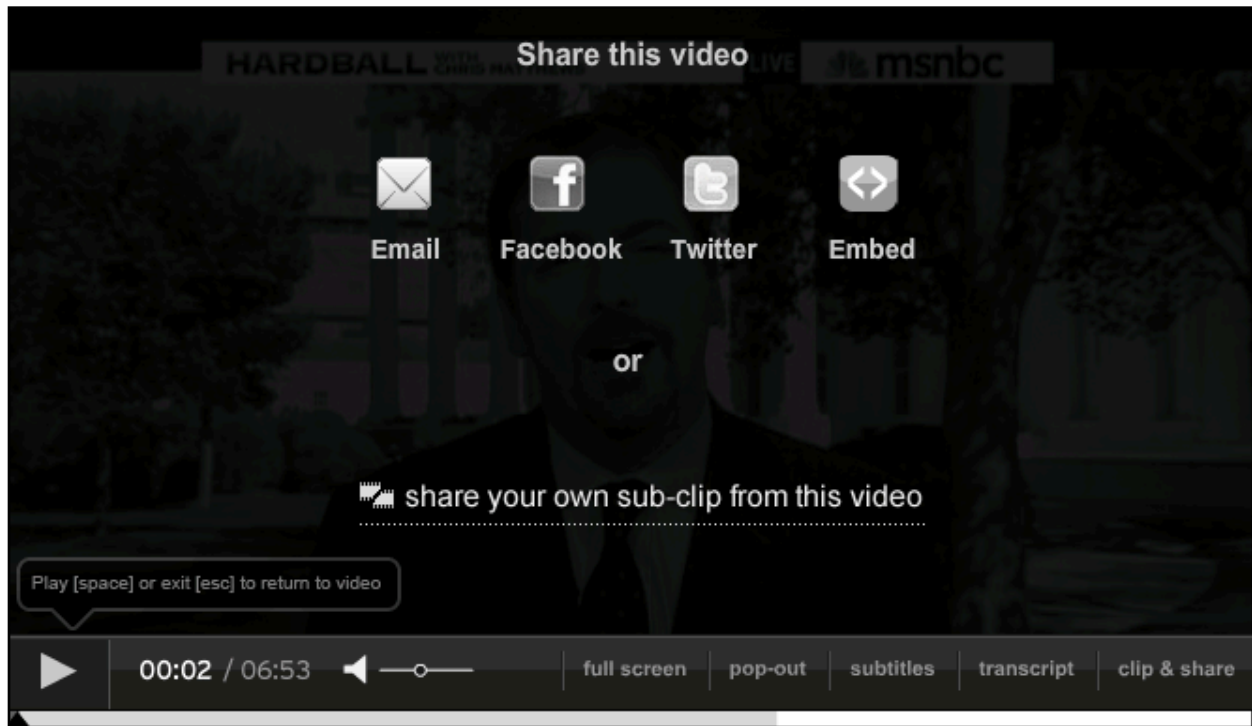


Figure 2.7 // The ‘clip & share’ Interface



Figure 2.8 // The ‘share your own subclip’ Interface

While a few news organizations, including Fox Business News, the Associated Press, and the Washington Post created embeddable players beforehand, MSNBC.com is widely credited with providing “the first embeddable video player among the major [professional] video producers in the United States” (Plesser, 2009b). One goal of the player, as stated by Tillinghast, was to make video from MSNBC.com more discoverable around the Web, rather than relying on users to seek out MSNBC.com as a destination site (Plesser, 2008b). As indicated in the introduction to this chapter, this was in many ways a response to the frequency with which MSNBC cable segments were being bootlegged to YouTube and other online video hosts (Plesser, 2008b). MSNBC.com’s deputy East Coast editor Randy Stearns recalls,

YouTube was stealing a lot of our thunder. In fact, you still can find more Countdown content on YouTube than you can on our site. But until we had a really good video player and could allow people to share it and clip it and embed it, we really couldn’t go after YouTube. We really couldn’t go after people stealing our content effectively, because they wanted to do the right thing. They wanted to consume the content. We just weren’t giving them the tools. So YouTube was, or there were other ways to do it, even if it was piracy. So getting that video player was a key part of our trying to do what we could to control the rest of the distribution.

Users rapidly took to using MSNBC.com’s embeddable player, and the development team quickly iterated on the original design, adding the ability to create embeddable sub-clips from an original segment, the idea being that uptake of videos would be greater if users could choose the specific portions of them that met their needs (Plesser, 2009b). Bloggers, as well as advocacy groups were among the groups that led adoption of the player (Plesser, 2009c; 2009d). One issue

early on was that the embeddable player was originally 425 x 339 pixels in dimension and impossible to resize.³⁷ Because of its fixed width, the player would either not appear correctly on—or worse, scramble the layouts of—some users’ Webpages. A year and a half later, Tillinghast described this lack of flexibility during an industry panel as “a bit of a problem for us,” remarking elsewhere that “if our embeddable player dimensions didn’t fit well within the structure of a Website, then they really didn’t use it;” for this reason resizing was one of the first new features to be added to the player (Plessner, 2009b, 2009d). In what follows, we’ll see how the progressive addition of features to the player, like subclipping and resizing, strike a balance between being as flexible and responsive to the varied desires and motives of potential users as possible, without giving up control of the product or its potential to generate revenue. We will also uncover the surprisingly diverse array of actors and systems that MSNBC.com has aligned in order to maintain this balance.

Chains of Custody: Engineering for the Conversation Economy

Many of the features and much of the work that goes into populating the player, on and off the MSNBC.com domain, are tailored to the demands of the conversation economy and intended to make video more findable and attractive to users who discover content via search and sharing. Stokes Young, MSNBC.com’s director of multimedia, explains the importance of the metadata that accompanies videos and how it’s displayed:

I haven’t heard it said lately, but the relatively recent—or long ago in Internet terms—catch phrase, “the semantic Web”...if you’re looking at things in an SEO focus. I would

³⁷ The resizing feature was on the development roadmap, but not yet available upon the first release of the player (Young, 2008).

argue it would also apply to the social Web. But basically textual metadata that represents audiovisual or purely visual content is necessary for the transmission and distribution of multimedia content and the quality of that metadata is then very important at the engagement point—however someone might encounter a headline, essentially. Or a thumbnail, right? A thumbnail from a video clip is metadata, right? It's a visual metadata that ideally represents one of the core ideas visually, with the headline, of what is in a video clip. So I think that what we have tried to do as a newsroom is to apply largely to that engagement point—both on our site, but if we distribute those two very simple pieces of content off the site—writing really good headlines and selecting really good thumbnail images that will best represent the video content, that will both engage people, and get them to click, but also not be a bait-and-switch. We don't want people to feel like they're getting one thing and to then feel like they didn't get what they thought they were going to get. So to honestly, but well-represent video content through engaging metadata selection, I'd say is one important editorial function that we do.

Moreover, a great deal of work must be done to make video circulate in a search-centric information environment when most search engines primarily index text, rather than images or motion pictures. Image and video search tools are increasingly ubiquitous, but nearly all of them operate on various textual descriptions of photos and motion pictures—textual metadata—rather than the multimedia objects themselves. That said, given the remarkable amount of video that's flipped each day at an organization the size of MSNBC.com, which not only transcodes programming from a network news division and a 24-hour cable news channel, but plenty of wire footage, “Web-extra,” and “Web-original” video as well—getting high-quality, standardized

metadata for every clip is a tremendous challenge. Search-optimized keywords are one form of metadata that will help a video become discoverable, both in MSNBC.com's internal archives and on the Web. But, as Tillinghast noted in an interview with Beet.TV,

[T]he big problem with metadata has been trying to get human beings to type in what those key words are at the point of production. And that's very difficult because often times you have field producers that are not even aware that their video is going to be used on the web, who are expected to put in the right key words to make it searchable. That's a very long chain of custody, if you will, for a piece of video to maintain integrity for metadata. (Plesser, 2009e)

Transcripts of video can be a tremendous help here. By themselves, however, searchable transcripts may help find a video, but not the specific section of it users are searching for. This is not necessarily an issue when it comes to short, three-minute television segments, but for longer clips, like, say, videos of inauguration speeches, a standalone transcript is still not an optimal navigational aid. MSNBC.com's director of multimedia, Stokes Young, remarks on revisions to the player in this regard:

In terms of video, one of the important things that we've done is build a platform that essentially time-syncs textual representations of the audio track of a video clip to that video clip timeline. First let me say what that means. That allows in a user interface for viewers to look at whatever the best existing textual representation is. So, generally on a live basis—like as soon as we publish an on-demand clip—that's the closed-captioning feed, assuming that we have closed-captioning from whatever the TV show is. And then in the hours after that, if indeed there is a formal transcript for that broadcast or cable

property, we then automatically overwrite the closed-captioning information with the formal transcript. There are two things that are happening in the background, that are pretty sweet—like kind of video spaceship technology. Those two things are this. First of all, at the level of the phoneme—the individual sound unit—each audio expression is broken out into an entity. In layman’s terms you might say [an entity is] like a keyword. But an entity is actually an indexed representative meaning, right, that is in some database. In our case, a specific database. So, basically if you see something like the Korean War referenced in a news clip and we pull that out, then you might reference that to an entity that’s called, well, “the Korean War,” or something slightly different. But we then know what that means, which then allows us to pick out the key entities in a particular piece of video and represent them as text, and then relate them to one another so that people can both relate them to one another, so we know what video clips have this entity in them, and also then within the clip...whenever someone says those words, we can actually jump using a transcript. You can [take a clip of] a Meet the Press interview that lasts, like eight or nine minutes, and look at the transcript, quickly find the part you want, or search for it in the transcript, click on the word in the transcript, click play and the playhead in the video immediately jumps to that place.

Young’s quote begins to drive home the extent of the effort that has gone into negotiating around the recalcitrant nature of online audiences. Capturing users who would resort to uploading, embedding, and/or watching bootleg YouTube clips isn’t simply about matching YouTube’s functionality, but about providing a technology to users that is in some ways more

flexible—ensuring that official clips are easier to find, faster to cut, and more customizable than those users would find elsewhere.

The first use of this technology on the MSNBC.com Website, as insinuated earlier, was to create a searchable archive of inauguration speeches featured in the lead-up to President Obama’s inauguration in January of 2009. To create the searchable transcript feature, and later incorporate it into the new MSNBC.com player and its “create subclip” functionality, available across all video on the site, MSNBC.com partnered with Nexidia, which provides the underlying software that breaks apart audio tracks into searchable metadata; the latter company claims its algorithms can make a 60-minute video fully searchable in under 17 seconds (Nexidia, n.d.a).³⁸ At the moment, this technology is sufficiently advanced that search engines outside of MSNBC.com’s own video-specific search have yet to integrate it—at the time of this writing even Microsoft’s Bing, which syndicates MSNBC video and powers general searches on MSNBC.com is not yet integrated with the timeline-linked video transcripts. The search-optimization advantage of the technology, then, is not yet fully realized. Even so, Tillinghast claimed soon after its introduction that the availability of video archive-specific transcript search had begun to facilitate a shift in user behavior on the site:

[W]hat we're finding is that demand has shifted significantly from the most popular videos, the top videos, to the tail, and that we're seeing much more take up on tail viewing of video in a way that we have not seen before. ... The niche stuff. And so it used to be that, in round numbers, that 80% of the videos watched were the top 100 most popular videos, or 80% of the streams were amongst the top 100 videos. Now we're

³⁸ It’s worth noting that consumer media isn’t Nexidia’s only revenue stream—the company also markets its software to intelligence agencies for data mining of telephone conversations (“Uncover critical intelligence,” n.d.).

seeing that it's almost shifting so that the majority of the streams viewed, or the videos viewed, the streams that we're aggregating are outside of that top 100. So, interest is being spread across a large set of topics and news stories and it's not as concentrated on just a few stories that we happen to put on the cover. (Plesser, 2009e)

The functionality in the embedded player that allows users to create their own subclips is a more recently introduced feature based on this technology. Like the original subclip feature—it's intended to increase distribution by allowing bloggers and other end users greater flexibility to grab and use MSNBC content in ways that meet their needs. But it's important to note that it's been developed for more than this specific purpose. The same technology that allows users to clip video based on textual transcripts was also intended to help automate additional portions of the behind-the-scenes encoding process at MSNBC.com—to reflow, in fact, a large portion of the work that's been discussed so far:

In the old school, or the old method was we had, what I used to euphemistically call, the world's largest TiVo where we would have satellite dishes on the roof of our building, we'd bring in the content, put it into a gigantic database, and then record it there and then go through manually and pick out the videos that we want to put on the web. Now that we're using the automated metadata we're able to drop it into a database inside of NBC, pull it from there directly into our systems, and then make it searchable for our users directly off our site, and then our editors are focused on basically what are the most important videos or the top videos and placing those prominently on the story pages of our site and our cover, but the rest of it is being handled in an automated way so that we can offer a big array of video choices to our users. (Plesser, 2009e)

Tillinghast's 2009 interview makes it sound as though the "old" way of transcoding video had already been supplanted by transcript-linking of video. In point of fact, while the process may ultimately be automated in the way he describes, the editors and Web producers I talked with were still using "old school" methods of flipping video for the Internet when I arrived to conduct my fieldwork in 2010. In other words, the quote blends expectation and achievement in interesting ways—he previews the teleological endpoint toward which heterogeneous engineering is being deployed. The precise reason why this plan had not *yet* unfolded as expected was not explained—it may have to do with the inertial quality of existing routines, issues with the reliability of the phoneme-matching software (which isn't infallible by any means), or it may simply still be faster for the moment to cut clips "the old fashioned way." Most likely the explanation lies in some combination of the three. In any case, the transcript-based subclipping enabled by the embeddable player can be understood as a public-facing manifestation of a much more cross-cutting attempt to simultaneously optimize (from MSNBC.com's perspective) the flow of content at several points along the developing distribution chain.

Another question from the beginning was how to monetize the embeddable player. The company worried that a heavy or obtrusive ad load might hinder adoption of the player and/or cause users to continue favoring unauthorized alternatives. As such, when the embed feature was first launched, the embedded player initially ran sans advertising. In 2008, Tillinghast explained,

We aren't running ads right now on the embeddable player. But it is something we're evaluating. Properly done, it's a good opportunity for us to be able to compensate ourselves for distributing that content out to others. When I say properly done, it can't be

excessively long and take away from the experience that the people who are putting the embeddable player on their site are seeking. So, if basically it becomes a trojan horse for a whole bunch of ads, then we've failed. But I think there is a place to monetize it in a tasteful and appropriate way. (Plesser, 2008b)

It's worth noting that launching an embeddable player is a prime example of the sort of move that loosens an organization's control over where, and to whom, content is distributed. Unlike Hulu, which focuses on distribution of entertainment programming, and employs numerous technological restrictions³⁹ to restrict the spread of embedded content to its target market, MSNBC.com employs relatively few technological countermeasures with its own embedded player. Most of the individuals I interviewed or talked with on the subject were unaware of any such restrictions. Randy Stearns, however, noted that there were some important, if limited, restrictions in place.

We do some geofencing, for instance. There's stuff that's rights-restricted outside of North America, so we can geofence it. They're pretty crude tools, but they work. They shut off the access where necessary—in Iran,⁴⁰ for instance, with certain sensitive stories. We can restrict access to North America in those cases, which is where most of our market is anyway.

Blocking entire nations from access to content with a few form fields or lines of code is, in some ways, an enormous amount of control over the flow of content. At the same time, as Stearns points out, in other ways this is a very crude, high-level restriction. Outside of Iran and other

³⁹ These include, but are not limited to, extensive geofencing that denies access to all countries outside the U.S.; domain-blocking that shuts down embedding of content on explicit sites and unauthorized mirrors; and user-agent banning that prevents devices other than PCs from loading free Hulu videos

⁴⁰ At present, Iran has no official copyright relationship to the U.S. and does not recognize World Trade Organization copyright laws.

countries on the wrong side of the geofence, video can still be embedded nearly anywhere. Frankly, having previously looked into the broad variety of restrictions imposed by online distributors of entertainment programming, like Hulu, I was a bit surprised that there weren't more attempts at MSNBC.com to control the contexts in which embedded videos were available. One of the key reasons for this difference, Charles Tillinghast explained, was that

Our content is highly perishable. And so it's not like an entertainment production where somebody has spent weeks, months, years to produce something at great expense and then the only way they can make money is to get people to pay to see it. We produce content that diminishes in value very, very quickly. Like every hour. And so people aren't in a very good position to make money off of our content by stealing it. They may dilute our ability to make money by putting it up in too many places other than our own Website. So what we've done is made our video really easy to embed so that it's actually more convenient for users just to steal it from us than record it and put it on YouTube. Then, if we do need to police it so that it's not on YouTube, we offer a free alternative. It's not like Hulu where, "No, you cannot watch that clip, ever." You know? Rather, it's, "Yes, you can watch the clip. But it must come off YouTube, and here's the link to watch it on our site. It's all free. Go for it."

Readers may recognize in Tillinghast's statement just the sort of economics of perishable content that Benkler (2006) described in laying out his economics of information production. But just several years earlier, the major networks and cable channels took a significantly different view of embeddable video. Indeed, several of the national newspapers offered embeddable video players quite some time before the networks did. The networks, on the other hand, and their news

divisions, attempted to fashion themselves as destination sites for video, displaying it only on their own sites and those of their business partners, where they had total editorial control over the context in which it appeared. However, as indicated above, the increasing popularity of embeddable content—including content that was being bootlegged from network and cable news—ultimately led all the national television news organizations to embrace embeddable video. At MSNBC.com, this was largely a decision made in managerial circles, but one that the editorial staff I encountered embraced. While they were, of course, not thrilled by the prospect of their embedded content being lambasted or appearing in sordid contexts, they tended to welcome healthy debate online and see less productive uses of their videos as inevitable, if not always desirable, elements of free speech generally or the Web in particular. Moreover, from an analytics perspective—meaning, the number of videos served by MSNBC.com got viewed—in some senses all traffic is good traffic, regardless of the context or intent with which the videos were embedded.

One of the tasks that Web producer Will Femia regularly took on was to send polite requests to bloggers and sites who might be using bootleg embeds of MSNBC content to kindly switch the source of their video to the official version of the clip in MSNBC.com's player. This is not to say Femia was tasked with rooting out every bootleg clip on the Web. Rather, this was something that was taken on a case by case basis and generally done only when a highly visible site (like the popular blog Mediaite, for instance), that had the potential to generate a significant number of video streams, was using an unofficial copy of the clip. Femia noted that this practice could become awkward in cases where a site or blogger that was drawing lots of traffic by making caustic remarks about an embedded clip. On the one hand, in such circumstances it

still seemed important to ask that bloggers replace a bootleg clip with an official one, both for the sake of consistency and because MSNBC.com would still benefit traffic-wise from the resulting video streams. On the other hand, making such a request under the circumstances could be tricky, as the Web producer had no desire to inflame the situation by giving the impression that MSNBC was out to silence its critics, or conversely seeming to show up hat-in-hand asking for more video traffic from said critics. But if MSNBC and MSNBC.com themselves are in many ways agnostic about the contexts in which their clips were viewed, the same cannot be said for advertisers, and here is where we encounter substantial technological intervention.

As mentioned above, placing ads on embeddable clips is a tricky proposition, when users can easily default to an ad-free alternative like YouTube. And in the time since it launched its embeddable player, MSNBC.com has experimented with various forms of minimally intrusive advertising, including placing ads in the player below the video, as well as brief pre-roll ads,⁴¹ clocking in at fifteen seconds or less. But getting uptake from users is only one part of the problem faced by content providers in this situation. Getting the advertisers on board is its own challenge. Video advertisers are highly concerned about the context in which their brands appear, as evidenced by the numerous instances over the years in which traditional television advertisers have pulled their commercials from programs they found objectionable. This same concern gets magnified considerably in the world of embeddable video, wherein a clip can appear on virtually any sort of Website. To get the buy-in of advertisers for embedded video, MSNBC.com turned to a company called YuMe, which similar to other online video companies

⁴¹ Pre-roll ads are ads that appear before a clip.

like Transpera, runs its own ad network, but specializes in “brand-safe advertising,” meaning that it employs numerous technologies and forms of certification to guarantee that advertisers’ commercials will only be packaged with a video when the embed appears in an unobjectionable context. The following comes from YuMe’s online marketing material:

We understand that you want to buy effective online video advertising campaigns without worrying that your valuable brand will appear alongside objectionable content. By focusing on premium publishers, enforcing high content standards, and creating proactive technology to prevent ads from running in undesirable syndicated environments, we're able to deliver the most comprehensive safeguards available to advertisers for online video campaigns. (YuMe, n.d.)

YuMe vets publishers’ video content at regular intervals to assure its quality to advertisers. Wherever an embedded player appears, the service also surveils the sites on which videos are served, automatically “collect[ing] detailed information about the in-page environment of a syndicated video player when it makes an ad request.” Pages and sites deemed unacceptable are added to the company’s “constantly growing blacklist of more than 1.6 million Web domains that contain inappropriate content. When we receive an ad request from a video player, we use our domain-detection capabilities to confirm that the player is not embedded on a blacklisted domain before serving an ad.” Finally, the subjective quality of sites where a player is embedded is ranked by YuMe based on the information harvested by the ad service. This information is then used to score the performance of publishers, in terms of the general quality of the sites on which their players are embedded. YuMe claims to “regularly encourage publishers to offer greater

campaign performance to advertisers by removing their players from lower-performing domains” (YuMe, n.d.).

YuMe in itself could make a wonderful case study in actor-networks and systems building. It brings together the aims of advertisers and of content producers, translating the resources and intentions of both into the terms of the other. YuMe also employs a variety of heterogeneous tools, wielding not just a technological platform, but commercial resources in the form of developed networks of advertisers and publishers. Lashed into MSNBC.com’s online distribution system, it allows MSNBC to thread a needle between the recalcitrant interests of advertisers on the one hand, who demand control over the context in which their ads appear, and the users of the embeddable player on the other, who want the flexibility to place MSNBC cable content anywhere on the Web, just as they would with a YouTube clip. The solution? MSNBC.com’s embeddable player can be placed on nearly any site, but ads will be served only in contexts deemed appropriate by advertisers.

Some of the technical problems solved by the intermediary companies we’ve encountered to this point, like Transpera, Nexidia, and YuMe, may eventually fade away, and in this sense they represent fascinating institutional kludges. For example, we may eventually have a universal mobile video standard, and/or cell phones capable of playing a wider range of video formats. Likewise, as some of the patented technologies behind YuMe and Nexidia become more widely available, publishers may be able to roll their own solutions to the problems these services attempt to solve. But if in one sense these intermediaries are kludges, we should also recognize them as heterogeneous engineers in their own right—all of them are thinking long term. Both Transpera and YuMe for instance, have used their position to develop large advertiser

networks with high-profile clients ranging from PepsiCo to Unilever. With these in place, they'll have something to market even after the technical problems they negotiate vanish. Nexidia, for its part, seems to be aiming for stability by pursuing a diverse portfolio of clients for its patented software, and could easily be purchased by a larger firm down the road, both for its client roster and its technical resources

Other Uses of the Embedded Player

The embeddable player not only enables unaffiliated bloggers and other visitors to MSNBC.com to clip video to their sites. It is also one tool that enables the company to enter into traffic-sharing agreements with other major news sites like Newsweek or the New York Times. In such arrangements, the Blue Site will host and/or link to articles from other online publications, in exchange for similar treatment, the idea being that the mutual brand exposure and flow of users back and forth between sites will benefit both enterprises. As one MSNBC.com staffer explained,

We partner with the New York Times and the Washington Post and Newsweek,⁴² so they can get better distribution, because we're sort of the firehose to get more eyeballs to read their content. But then we do a partnership where, you know, "you scratch our back, we'll scratch yours," right? So, "Hey, we'll put up that cool new story—the New York Times article—but make sure you put the Today Show video, embed a video up on your site, too." So, there's these partnerships that help distribution. ... We do these business deals all the time to say, "Hey, you know, you're really our competitor, but our audience

⁴² Newsweek and MSNBC.com ended their traffic-sharing arrangement shortly after my fieldwork was complete (Kaplan, 2011).

and content are similar. So it sort of makes sense, just from distribution to partner up.”

And we’ll make sure it works for everybody. We’ll split revenue. We’ll have insight into how many people are looking at your article on our site. I mean, it’s kind of a weird thing, right? To have someone you consider a competitor, putting their links up. But the Web world works so much differently than other mediums, so all of it’s kind of funky.

It’s worth noting that only a few years ago, journalism studies scholars found online publications to be extremely reticent to link to other sites, let alone other news organizations (Dimitrova et al., 2003). This working of the “competition” into an online distribution strategy is both a reminder of how quickly online distribution is changing and an excellent example of the binding together of recalcitrant agents into a working system. The business managers at MSNBC.com have come to realize that Web users get their news and information not from one portal, but from multiple online destinations—and that the key to drawing in audiences and revenue is to be in many places.⁴³ In this vein, Web producers and PR staff at MSNBC.com also frequently email links and video embed codes to influential and high-traffic blogs, like the Huffington Post, as well as media columnists like Brian Stelter of the New York Times. Much like traditional press releases, these promotional activities often result in articles being written. When the embedded player accompanies such a piece, many additional streams—and their attendant ad revenues—accrue to MSNBC.com. What’s more, this sort of direct promotion of links and videos to other sites has become so common that it has earned its own industry shorthand, “digital word of mouth,” or “DWOM” for short. It currently takes place largely in-house, but in the past, MSNBC.com has hired firms specializing in DWOM to promote their top

⁴³ This philosophy is similarly reflected in the Web venture’s expansion into the MSNBC Digital Network, which encompasses not just the Blue Site, but multiple online destinations that have now been launched, acquired, or spun off from the original domain.

stories across the Web. The Huffington Post, which like MSNBC TV features a left-leaning audience, has been particularly receptive to these efforts over the years, becoming one of the leading users of MSNBC.com's embedded player (Plessner, 2009c). By February of 2011, when the Huffington Post was acquired by AOL, it ranked "second only to MSNBC.com as the largest distributor of MSN[BC] TV video" (Wallenstein, 2011).

Finally, it's worth noting that the embeddable player has enabled not only distribution on other domains, but allowed for further integration of different publishing systems within the company itself. MSNBC.com was one of the first sites affiliated with a broadcast news division to launch blogs, and because many of its early efforts were experimental, rather than mass-managed, until very recently there were multiple blogging platforms in use on the site, including SixApart's TypePad and a CMS from Telligent Systems called Community Server, that were run in tandem with, but never fully integrated into, MSNBC.com's primary publishing systems for articles and multimedia. The development of an embeddable player, however, meant that video could be used on MSNBC.com blogs just as easily—and in fact, in exactly the same way as—it was used on sites that were totally unaffiliated with MSNBC.com, all without doing any heavy lifting to integrate the back ends of the various blogging platforms and MSNBC.com's primary CMS. This strategy has been successful enough that even when the company converted all of its blogs, including those associated with MSNBC TV, to a standard blogging platform in 2010, they didn't use the primary MSNBC.com CMS. Rather, they were able to build the new software on top of a mature, but independently developed publishing system from the social media startup Newsvine, which had been acquired by MSNBC.com in 2007. While publishing of video through Newsvine's blogging software has been streamlined over time—getting an embed code

takes less pointing and clicking than it does for an ordinary blogger—it nonetheless still relies on the embeddable player.

Finally, the embeddable player can be used on Twitter and Facebook, meaning that when users on either service link to a clip—in such cases, the actual embed code isn't necessary—the embedded player automatically appears on the service. Users can share such a link either by copying and pasting the URL from their browser when loading it on MSNBC.com, or by using the social media share buttons that appear in the both the full and embedded versions of the player itself. MSNBC.com and MSNBC TV staff also regularly use the same functionality to post clips to Twitter and Facebook. It's important to note that there's once again a fair amount of heterogeneous engineering necessary to enable this social syndication of video. Both Facebook and Twitter require that video players be whitelisted, meaning that both the video publisher and the player itself must be approved by the social media service to enable this functionality, and additional code must be written to allow the service to obtain the embed code for a clip based on its URL. While publishers are regularly OK'd by Facebook and Twitter, relatively few players are whitelisted by the services (Cronin, 2009), meaning that in practice it's usually necessary to publish content using an already-approved player such as Brightcove, YouTube, or JW Player. That MSNBC.com went through the trouble of getting its own player whitelisted—and likely making technical tweaks ensure it operated correctly—on Facebook and Twitter is a testament to the growing importance of social media and the conversation economy to online video distribution, as well as the influence that Facebook and Twitter in particular have begun to wield in the online distribution space.

At this point we've followed the path that televised video takes between the time it is first broadcast to the time it reaches end users online. It's important to note that even now, the route we have traced is not an exhaustive one. Live feeds of major events are also occasionally simulcast on television and the Web. MSNBC and NBC News television properties produce other sorts of video—raw and behind the scenes footage, as well as “Web-extra” (unaired), and “Web-original” (made for the Internet) video—and there are procedures and tools in place for putting these online as well. Moreover, the actual use of blogs and social media accounts across different television programs and parts of MSNBC is highly varied in a way that will be explored more fully in the following chapter.

As I argued in the introduction, the attention of media sociologists, communication researchers, and journalism studies scholars in recent years has been predominantly focused on the major changes to news production that have accompanied the rise of the Internet. But the actual distribution medium that has supposedly wrought these major changes has itself been left largely unproblematized. What we have done, in tracing out the path of online video distribution this far, is to get beyond the notion that online news video “just plays,” and to re-conceptualize it as embedded in a large and complex system. Just as Hughes took note of the Twentieth Century gestalt switch after which it became increasingly difficult for engineers (or sociologists or historians) to see an airplane as existing apart from “a system involving airfields, air controllers, fuel depots, and maintenance facilities,” I have, I hope, made it equally difficult to see a virtual object like a video player as distinct from a complex network of relationships involving advertisers, end users, device manufacturers, media conglomerates, software giants, application

developers, white-label development firms, satellite links, corporate intranets, ownership shares, corporate contracts, and international copyright law, among others.

Law's description of the Portuguese *volta* is filled with recalcitrant agents that simultaneously served as resources and shaping forces for the system builders. In the same way, we've seen how the seemingly simple goal of making televised video available on the Web or pushing it to mobile devices requires the enlistment of myriad actors and technologies, as well as creative responses to the limitations imposed by them. The resulting route, or video volta if you will, is a remarkable achievement. It is not necessarily a stable achievement in the sense normally thought of by sociologists of technology as a "black box;" as I write this, the relationships between vendors, publishers, developers, device manufacturers, advertisers, cable providers, cellular providers, and technological standards are in constant flux. The volta is being constantly rerouted and reassembled. But the relationships involved are successful enough and stable enough *at any given moment* that, from the consumer's perspective, video just plays. How and where video plays, and for whom—where the volta goes—is nonetheless still contingent on the shape of these relationships.

Lastly, in mapping out the path of video, we've also just begun to see how MSNBC might not be a single, monolithic system builder filled with teams all in pursuit of a "common system goal" of the sort originally envisioned by scholars like Hughes (1987, p. 51). In fact, as we've seen, MSNBC is not even two system builders but an assemblage of numerous project teams and groups, including show staffs, teams of Web producers, video editors, development teams, PR staff, and more. The needs of many groups within the organization get imprinted on an object like MSNBC's embeddable video player, and make their influence felt on the flow of

content. And as complex as the relationships behind it are, video is only one aspect of this system—just one sort of content put online by MSNBC television programs that also produce articles, blog posts, photos, audio clips, and social media content. As far as we’ve come conceptually with the video example, we’ve yet to truly grapple with this shift in perspective from a view of the organization as a firm in pursuit of singular goals to one that sees it as an assemblage of teams and actors whose provincial interests—at times in concert, at times competing—have as much influence over the volta as the recalcitrant actors and forces we’ve traditionally conceived of as existing “out there” beyond the boundaries of the organization. This is the task of the following chapter, which attempts to chip away at the monolith perspective by examining how various groups of heterogeneous engineers *within* MSNBC TV and MSNBC.com have left their stamp on the manner in which television news content gets distributed online.

chapter three // breaking apart the monolith

The promise made in the previous chapter, to demonstrate how news work has become enmeshed with distribution practice, has been only partially fulfilled. We've seen how editorial staff, like MSNBC.com's television-dedicated Web producers and video editors, form a vital part of the system that's emerged for putting television content online. But we've yet to adequately explore in any depth how content other than televised video is made available on the Internet, or how various teams and shows within MSNBC.com and MSNBC TV manage networked distribution. Based on what I had seen from the outside of MSNBC and other news agencies online, when I arrived at each of my field sites I expected to find software developers and news professionals adapting in sophisticated ways to digital distribution and the conversation economy—developing a keen sense of what social network strategies worked best for their material, which stories to forward to politics junkies at the Huffington Post, which to pass along to mommy blogs, or which might interest health sites or Media Bistro. And indeed all these things are happening. What caught me off guard initially was the amount of work that was going into getting content to travel *within* the media organization—to get editors on the Blue Site interested in posting a link to a *Nightly News* clip, to turn television commentaries into Web articles, or to carve out a blog space for a new cable news show. It quickly became clear that MSNBC was not a single entity, or even two, but rather full of staffs and project teams with distinct aims, at times in concert, other times in conflict.

And in fact, a growing body of literature suggests that when it comes to large media conglomerates, expansion, partnership, and vertical integration of media companies does not

mean simple homogenization of production cultures or content. Rather, large media organizations are full of editorial subcultures with highly provincial and at times competing agendas. And as more and more pieces of these organizations become publicly visible, taking on responsibility for distribution, connecting with users and audiences through niche blogs and social media accounts, what becomes apparent is not just the necessity of taking a network view of the external environment in which information is made to circulate, as emphasized in the last chapter, but also the multiplicity of actors and heterogeneous engineers *within* a large media organization like MSNBC.

Classic media sociology has often treated news organizations as monolithic and journalists as interchangeable, holding contemporary journalism to be a remarkable achievement of professional socialization (Schudson, 2003). Gans (1980), in his classic ethnography “Deciding What’s News,” suggested that there were few remarkable differences between the newsroom cultures of CBS News, NBC News, *Newsweek*, and *Time*, remarking that he was “impressed by the similarities” among them, and that “news organizations are...sufficiently bureaucratized that very different personalities will act much the same way in the same position” (Gans, 1980, p. xxiii). He defines a journalistic culture that spans not only different newsrooms, but altogether different media, indicating that “the stories which different news media select are sufficiently similar to suggest that technology is not a determining factor” in decision making (p. 80).

But perhaps nowhere is the claim of a uniform national journalistic culture more evident than in the literature on news values, where many scholars have taken news judgment across individuals and institutions to be reducible to a set of knowable, enumerated variables like

“celebrity” and “negativity” engrained in the customs, if not the psyche of news workers. Here journalists are often said to be so well socialized that they cannot step outside their collective value system to comment on it (Warner, 1970; Bell, 1991; Hall, 1973; Hall et al., 1978).

According to Bell (1991), news values “approximate to the—often unconscious—criteria by which newswriters make their professional judgements as they process stories,” while Hall (1973) calls news judgement “a ‘deep structure’ whose function as a selective device is un-transparent even to those who professionally most know how to operate it” (p. 181).

While some classic studies, like Tunstall’s (1971) work on special correspondents, have argued for some diversity within journalistic culture, the emphasis of much of the classic sociological work on the news media has been on professional socialization that spans institutional boundaries and the resulting monism of journalism and news work. This is perhaps doubly true of sociological work examining the relationship between the media and protest movements, where the news media are painted as examining the world with a singular, well-defined ideological lens, which is contrasted with and said to violently distort the picture of a diverse social movement struggling to find and speak with a coherent voice (e.g., Gitlin, 2003; Ryan, 1991).

Breaking Apart the Monolith

Over the last two decades, concentration of media ownership has also increased, resulting, by some estimates, in as few as five corporations owning the majority of American legacy media outlets (Bagdikian, 2004; Deuze, 2007). Consequently, many scholars have shown renewed interest in the possibility that diversity exists in the press—if only to warn us that it is

evaporating as transnational media companies distribute their risk and gobble up their competition. Noam (2009) takes issue with some of the more drastic figures produced by scholars and activists, cautioning that much of this literature on media concentration has been “stronger in [ideological] commitment than in empirical evidence” (p. 21). With that said, media concentration does indeed appear to be on the rise (Deuze, 2007; Noam, 2009). Moreover, while many observers of media continue to argue that the ascension of the Web as a popular medium, with its low barriers to publishing, will lead to a diversification of the media environment, there is increasing evidence to the effect that ownership concentration among online media providers is advancing in a manner not unlike the various forms of mass media that preceded it (Dwyer, 2010; Noam, 2009).

Meanwhile, industry critics like Davies (2008), and scholars like Schudson (2003), Deuze (2007), and Boczkowski (2010) contend that as the instantaneity of news distribution increases, whether that’s through the ascendance of live 24-hour cable news, or the instant publishing mechanisms available online, a culture is rising within the news media that prioritizes constant monitoring and imitation of the competition, and a penchant for pack journalism. Others argue that the diversity of news content has dissipated as reporting resources have diminished and journalists have become increasingly desk-bound and reliant on the same information subsidies, institutional sources, and competing news outlets for information (Fenton, 2010). Without idealizing the past or calling for a return to a “golden age,” the common thread among these scholars is a focus on declining diversity of content in the news media.

Once again, these studies focus on production, rather than distribution of the news, but they share a common message about news organizations. If one of the key tasks of sociology is

to locate and evaluate the interplay in society between structure and agency (Mills, 1959), a substantial effect of the twin foci outlined above—on socialization and the reproduction of professional values in journalism on the one hand, and the consolidation of media ownership and the homogenization of news content on the other—has been to emphasize structure and the exercise of structural power within news organizations at the expense of the agency of individuals players and groups working within those organizations (Hemmingway, 2005). In a sociology ruled by structure, institutional change goes largely unexplained (Giddens, 1984). Many scholars and industry observers, however, have noted that journalism and many of the major media industries are now in a period of tumultuous change, owing in no small part to the widespread adoption—not just by organizations, but by publics and individuals—of technologies for digital production and distribution (for examples, see Deuze, 2007; Noam, 2009; Dwyer, 2010; Singer, 2010). This has led to a major disconnect between much of the core literature in journalism studies and contemporary news practices, as Schmitz Weiss and Domingo (2010) recently noted:

The research on the sociology of journalism produced from the 1970s to the 1990s opened up the black box of journalistic craft, but its research interests and theoretical approach made innovation and change a blind spot of its inquiries. We learned about the routines that construct news, but little about the evolution in formats and the progressive introduction of digital technologies. (p. 1158)

Keeping pace with the rapidly transforming production and distribution environments outlined in the previous chapter has led to substantial shifts in the way that legacy media institutions are organized, such that while relatively static structural characteristics like professional

socialization persist within news organizations, we should be increasingly wary of treating them, in isolation, as defining characteristics of media industries. Rather, as Deuze (2007) has argued, large media conglomerates are in fact assemblages of numerous distinctive organizational subcultures—a situation that has probably long been true to one extent or another, but is intensifying as these corporations retool to keep pace with the rapidly changing business environment brought on by online production and distribution:

In order to make the transition towards a more flexible type of production large conglomerates in recent years have tended to reorganize themselves into multiple smaller units, or have shifted towards a more decentralized, team-based managerial and working style—significantly flattening the existing hierarchies in the company. At the same time recent case studies suggest that within many of these conglomerates the sharing of knowledge or cross-fertilization of ideas and projects is in fact quite minimal, and tends not so much to depend on structural intra-firm relationships (in business jargon: “synergies”), but rather on personal, informal, and indeed emotional personal networks. (Deuze, 2007, p. 98)

This is not to say that the professional identity of journalists fails to cut across intra-organizational boundaries—on the contrary, Deuze’s (2007) own review of changing work conditions within the news media suggests that professional identity is still a dominant force in news production. At the same time, as he puts it, that “professional ideology” is “interpreted, used and applied differently across media” and “largely determined by the culture of the newsroom or publication one works for” (p. 168).

In other words, if we intend to develop a network perspective on digital distribution, we must extend our gaze not just outward to the myriad actors that impact distribution “in the wild,” but inward as well, recognizing that large media organizations are not single actors with singular objectives, but complex and dynamic assemblages of individuals, groups, and technologies whose interrelations all impact the flow of content. Taking such a stance not only produces a fuller picture of digital distribution, but suggests that organizational boundaries themselves are in part constructions that do important work, at times obscuring the complexities of the social/technological assemblages around which the bright line is drawn (Couldry, 2008). In the remainder of this chapter, I will lay out several examples of groups within MSNBC.com and MSNBC TV whose distinctive interests, competencies, and limitations have had major impacts on online distribution of television-related content across MSNBC. First, however, I would like to introduce a number of helpful areas of scholarship that will aid in this exploration.

Provincialism and the Sociology of Technology

As stated, an object of this chapter is to move past the homogenous, monolithic view of the news organization by taking a local, situated view of digital distribution. There have been a number of calls in the literature on new media generally, and journalism in particular, to “provincialize” studies of digital tools and digital culture in this way. Coleman (2010), for instance, in reviewing the ethnographic literature on new media, notes a tendency toward broad over-generalization in academic work on online culture, with scholars frequently tending to assume that digital media are used in a similar fashion everywhere, and with similar consequences. Drawing on myriad examples from digital ethnographies, she convincingly

demonstrates the manner in which the technologies of the Internet are both adopted and put to use in highly divergent patterns by different groups in different social contexts, concluding that “the fact that digital media culturally matters is undeniable but showing how, where, and why it matters is necessary to push against peculiarly narrow presumptions about the universality of digital experience” (p. 489). Coleman (2010) implores researchers to cast additional light on the “local contexts and lived experiences of digital media” (p. 489), and to take a provincial view of media use and effects. Plesner (2009) draws a similar conclusion concerning much of the extant literature on new media and journalism, suggesting researchers need to pay much closer attention to contextual and provincial uses of Internet technologies in newsrooms, rather than continually seeking to construct a “general theory of email communication in newswork” (p. 620).

A number of theoretical frameworks from the sociology of technology are useful in an effort to provincialize digital distribution in news work.⁴⁴ The first framework worthy of discussion is generally referred to as the social construction of technology (SCOT), pioneered by Pinch, Bijker, and Kline, among others (Kline & Pinch, 1996; Pinch & Bijker, 1984). SCOT holds that the shape taken by technological artifacts is a negotiated one reflecting the interests of multiple social groups, each with distinctive views of what the technology is, represents, and what it should or shouldn’t do (Kline & Pinch, 1996; Pinch & Bijker, 1984). Such groups may refuse the technology altogether, or use it in very different ways, and as such technologies are

⁴⁴ It’s worth noting that there are extant debates between scholars subscribing to a number of the theoretical frameworks I point to here. For example, social construction of technology (SCOT) theorists often criticize actor network theory for its notion of “general symmetry”—treating human and non-human actors as equivalent for analytical purposes. Meanwhile, SCOT tends to focus on negotiations and controversies surrounding the stabilization of technological forms. Pinch (2010) refers to this as a conceptual “methodology for making certain non-humans visible. If the non-humans are relevant to social groups then they are relevant to the analysis” (p. 83). This was in response to the charge by theorists sympathetic to ANT, who have often critiqued SCOT as an attempt to reduce explanations of socio-technical systems to social effects. In my view it is unnecessary to take sides in such a debate—rather, I wish to acknowledge and draw from the theoretical insights of multiple traditions here. The same is true in the following chapter, where I introduce additional frameworks for exploring knowledge systems, such as Knorr Cetina’s notion of epistemic cultures.

said to have *interpretive flexibility* (Kline & Pinch, 1996; Pinch & Bijker, 1984). Kline and Pinch (1996), for example, in taking a SCOT approach to chronicling the early development of the automobile, were able to show how its development was heavily influenced initially, not merely by the (sub)urban motorists celebrated in contemporary car culture, but by opposition groups determined to prevent car adoption and rural users who modified their vehicles to power washing machines, pump water, and shell corn. “SCOT emphasizes multiple social perspectives, social construction, and the use of tools in specified contexts” (Gay & Hembrooke, 2004), and when used as a framework for organizational studies, holds out the possibility that organizations are not monolithic, but made up of multiple subcultures, each with the potential to impact technological development and adoption (Jackson, Poole, & Kuhn, 2002).

Plesner (2009), for her part, points to actor-network theory (ANT) as a framework that is both well-suited to local and contextual analyses of journalism, and to describing changing workplaces. In light of this, there have now been several articles and manuscripts to make the case for applying ANT to media and/or news work, including (Turner, 2005; Hemmingway, 2005, 2008; Couldry, 2008; Domingo, 2008; Anderson, 2009, 2010; Mould, 2009; Plesner, 2009; Schmitz Weiss & Domingo, 2010). Many of the tenets of ANT are already familiar to us at this point, being that Law’s framework of heterogeneous engineering introduced in the previous chapter is in part an actor-network reading of the sociology of systems. Broadly, ANT emphasizes heterogeneity of the actors involved in human enterprises, emphasizing not merely social arrangements between people, but also the work done by numerous non-human actors from machines to laws in the creation of the social/technical environment in which we live. Much as in Hutchins’ (1995; with Klausen, 2000) theory of distributed cognition, ANT theorists

take note of the various ways in which human tasks are automated by—or, to use the ANT term, *delegated* to—non-human actors. Actor-network theory asserts that once we recognize that a piece of layout software does the job of a human typesetter, it becomes harder to rationalize the omission of such non-human actors from our accounts of social reality, both because the choice to automate a particular process is significant in itself, and because we have admitted the notion of material agency—that artifacts do work in what are traditionally thought of as social systems (Latour, 1988).

ANT's founders, Callon (1986) and Latour (1988, 1993), in criticizing traditional sociology for its omission of material agency, have famously pressed this insight to its logical extreme, proposing a tenet of *general symmetry* that, for analytical purposes, refuses the admission of any distinction between humans and non-humans in actor-network studies. For this reason, ANT is often portrayed by its founders and champions as an oppositional sociology, a corrective to traditional sociology's emphasis on the social. However, researchers outside of ANT's inner sanctum—perhaps recognizing some degree of irony in criticizing a field founded on the social for emphasizing the social—have tended to treat general symmetry as a methodological insight, rather than an ontological claim. ANT has traditionally been applied to both the construction of scientific knowledge—how we create networks of resources that turn a messy world into a set of neat equations—as well as to the construction of tools and machines—how a tentative technological solution to a vaguely defined problem similarly becomes a stable, even mass-produced artifact (see, for example, Latour, 1987, 1990; Latour & Woolgar, 1986; Law & Callon, 1988, 1992). Where I have employed Burke's (1965) notion of recalcitrance, ANT theorists generally talk of *translation* to similarly emphasize the work that must be done

when the affordances and interests of one actor fail to fit neatly into the plans or routines of another. When the relationships between networks of actors and the epistemological or technological solutions they support ultimately become stable and routinized, they are said to have been *black-boxed*.⁴⁵

On balance, the media sociology literature that concerns itself with actor-network theory is predominantly aimed at comprehending changes in media production rather than how heterogeneous assemblages of actors contribute to changing patterns of news distribution. For example, Mould (2009) uses it to examine independent film production in Australia, Hemmingway takes an ANT approach to the rise of “personal digital production” within the BBC, and Plesner (2009) examines the use of email as an information gathering device in newswork using ANT as a framework. However, such sociological accounts nonetheless highlight a number of contributions of ANT to understanding media work more generally, even as it pertains to distribution. Several authors, referencing actor-network theory’s focus on the marshaling of resources, as well as the discovery of changing and newly established relationships among actors, have conceived of ANT as a theory that privileges agency; they champion it as a corrective to traditional media sociology’s focus on the reproduction of structure, as well as a method for studying emerging, as opposed to established, roles and practices in news work (Hemmingway, 2005, 2008; Mould, 2009; Plesner, 2009; Anderson, 2009, 2010; Schmitz Weiss & Domingo, 2010). Others appreciate ANT’s facility with issues of material agency, claiming it offers a theory of technology long absent from journalism studies and sorely required in an age of computer-assisted reporting and Internet publishing (Domingo, 2008; Plesner, 2009;

⁴⁵ In the previous chapter, I point out how many technological systems that appear stable to the end user may actually be in flux.

Anderson, 2009, 2010; Schmitz Weiss & Domingo, 2010). Hemmingway (2008) and Couldry (2008) similarly suggest that communication and media studies have long tended to focus either on the structural conditions of media production or its output and audience effects, with little attention paid to the actual process of mediation—ANT, with its focus on the machinery of knowledge production and the role of technology in the translation of both motivation and information, is said to provide a valuable methodological corrective to this state of affairs. A number of authors also treat ANT as something of a field theory, not unlike Bourdieu's (1983); the manner in which the structures of entire actor networks can shift in response to new entrants is said to provide a lens on how new technologies have helped to reshape journalistic practices (Domingo, 2008; Hemmingway, 2005; Schmitz Weiss & Domingo, 2010). Finally, and perhaps most valuable to the present discussion, a handful of media theorists, including Turner (2005), Mould (2009), and Anderson (2009), have painted ANT as a tool for studying project-based, non-traditional, and more broadly postmodern forms of media work of the sort that are largely absent from traditional studies of media sociology:

To date, journalists and almost everyone who studies them remain wedded to a deeply modern understanding of the profession. In keeping with a world view that routinely and firmly separates the natural from the mechanical and the actor from the action and its consequence, journalists and those who study them routinely separate news and newsmakers, reporters and audience, press and politics. These distinctions have begun to break down in practice though. As new media technologies have begun to invade the journalists' domain, they have brought with them a need for new theories with which to make sense of the production and circulation of public discourse and for the role of what

Latour and others might call socio-technical hybrids in the process. Actor-network theory (ANT) offers a powerful resource for this project. (Turner, 2005, p. 321)

Changes to traditional organizational forms have not escaped the attention of social scientists. On the one hand, much has been said about the emergence of newly influential forms of commons-based peer production (for example, see von Hippel, 2005; Benkler, 2006; Boyle, 2008; Bruns, 2008; Coleman, 2010), while on the other, a number of researchers have noted a “flattening” in the structure of more traditional organizational forms, wherein contracting and project-based forms of teamwork have begun to supplement or supplant traditional hierarchical management strategies (Hughes, 1998; Powell, 2001; Deuze, 2007). As discussed earlier, Deuze (2007), in surveying the literature, has made a wide-ranging argument that contemporary media firms operate on assumptions of constant and permanent change, driven in part by technological development, concluding that “whether real or perceived, a structural sense of constant change and permanent revolution is the strongest guide or predictor of the human condition in the digital age” (pp. 234-235). His analysis brings us full circle to the notion of systems building, an enterprise Hughes (1998) contends changed drastically between the beginning and end of the Twentieth Century, ultimately resulting in “a commitment by industry to change-generating projects rather than to long-lived processes” (p. 5).⁴⁶ He continues,

System builders presiding over prewar projects assumed that they would create a production, transportation, communication, or energy system that would remain virtually unchanged for decades; those presiding over technological projects today expect the

⁴⁶ The historical reasons for this shift are complex and a detailed account of them is beyond the scope of this manuscript. Hughes (1998), for his own part, attributes the transition to the spread of countercultural values during the 1960s, the demonization of the military-industrial complex—which pioneered many aspects of Twentieth-Century system building—during the Vietnam War, as well as the prominent failure of several Great Society projects aimed at bringing a rather too hierarchical systems approach to public works and welfare programs.

systems they build to evolve continuously and to require new projects to sustain the evolution. This attitude is characteristic especially of engineers and scientists in the computer and communications industry. In a front-page article on 19 August 1996, the *Wall Street Journal* finally recognized the trend. Alluding to the increasing number of nomadic computer consultants who, moving from one project to the next, solve computer problems for various organizations, the article stated that the nomads point the way “toward something significant: More and more of the work in America is project oriented. ...” Recent books about management focus on projects, too, especially those that create new computer hardware and software. (Hughes, 1998, pp. 6-7; ellipsis in original)

The existence of myriad, loosely coupled teams existing within and across organizations, alongside more traditional managerial hierarchies is a hallmark of the “postmodern” style of systems building and management described by Hughes (Hughes, 1998), in which “[d]iscontinuous change is the expectation of project professionals” (p. 302).

Once again, heterogeneous engineering offers a useful framework for drawing together many of the insights above. It is itself a variant of actor-network theory and offers up the analytical advantages enumerated by the scholars who have sought to bring ANT to the fore of media sociology. At the same time, while heterogeneous engineering employs general symmetry as a methodological insight, it is not an oppositional sociology. Rather, in laying out the framework, Law (1987) sought to build on insights of SCOT—particularly the manner in which the interests of many groups become inscribed in the ultimate shape of technological artifacts, with the final form often being one reflecting the interests of those powerful groups who were best able to marshal resources in their favor. He also built heavily on Hughes’ notion of systems,

and particularly the observation that systems engineering is a heterogeneous enterprise that involves not merely machinery, but science, law, commerce, and social influence. Finally, while heterogeneous engineering eschews specific levels of analysis, it nonetheless connects to more traditional organizational studies in that it has been offered up among organizational scholars like Chia (1995), as well as Jackson, Poole, and Kuhn (2002) as a methodological framework for understanding the structure of alternative and postmodern organizational forms. As Chia (1995) puts it, as organizational forms take on discontinuous and unexpected guises,

Law insists that if we want to understand social phenomena such as organization, it is important not to start out by assuming that which we wish to explain. Thus, we cannot begin by assuming the unproblematic existence of social entities such as ‘individuals’, ‘organizations’ or ‘society’. Instead, we should begin by assuming that all we have are actions, interactions and local orchestrations of relationships. From this we might then begin to ask how it is that some kinds of interactions appear to ‘succeed’ in stabilizing and reproducing themselves, thus generating ‘effects’ such as ‘individuals’ or ‘organizations’, whilst others disappear completely. (p. 595)

Some Additional Tools for Thinking With

Lastly, before turning to the chapter’s first case, I would like to build from the concepts introduced thus far a few conceptual tools to carry with us into the remainder of the chapter. We’ve encountered, for instance, an excellent insight that Law adds to Hughes’ notion of systems, which is particularly apropos in studying postmodern actor-networks: Law emphasizes the entropy inherent in systems, the manner in which they are filled with recalcitrant actors that

are always in tension and require continual work to hold together. If Law is right and systems are in a constant state of entropy, what needs explaining is not change, but the fact that there is ever stability, or even the appearance of it. Let me cull this observation and give a name to it: Under this lens, a system that appears stable or static from the outside is actually under a great deal of *isometric pressure*. In other words, there are many powerful pressures on the system, applied by different parties, that cancel one another resulting in the illusion of calm. Like the contraption from *Apollo 13* we visited in the previous chapter, all of these parties may be pushing in different directions, but they are assembled in such a way that they collectively hold together. As soon as one actor relents or changes direction, however, the entire system becomes dynamic, veering and shifting under the new balance of pressures. Isometric pressure, or isometric stability, here refers to the temporary stability of a collection of actors as they hold an arrangement that responds well to each of their energies. To give an example from the previous chapter, MSNBC.com would no doubt rather publish a live stream of MSNBC shows to the Web, while cable providers would rather live content be available online only through their own distribution system or not at all. The current, isometrically stable arrangement involves MSNBC.com making complete show content available online through a time delay—a state of affairs that could easily become dynamic again, should the business model of online video distribution change, or in the event that MSNBC TV, MSNBC.com, or any of the cable providers with a significant financial stake in MSNBC TV content are given a reason to become more aggressive about their own position. And in fact, as I indicated previously, there are signs that this may be occurring. As online video distribution becomes more lucrative, both cable providers and cable channels are releasing their own subscription-only services for viewing live

television content online, which require users to authenticate themselves as existing cable subscribers. This new model, dubbed by the industry “TV Everywhere,” is widely viewed as having the potential to disrupt free content models online as cable providers move to monetize their access to content across platforms (Albrecht, 2009a, 2009b). CNN has recently moved begun airing live television content online via a TV Everywhere model (Ferenstein, 2011), and a similar compromise might well be on the table at MSNBC.com.

A second important property of postmodern systems to give name to is *vantage point*. In describing modern (as opposed to what he dubbed “postmodern”) systems, Hughes (1987) painted them as nesting, like so many dolls, inside one another. A large system, like a national power grid, has within it many distinct subsystems—local grids, and so forth—that can, for analytical purposes be described as systems in their own right. This gives the observer a choice of where to stand in relation to the system, but—to push forward with another physics analogy—it is a very classical view of the universe of systems, suggesting one global frame of reference. We can choose which piece of the chart to study, but it remains part of the same branching hierarchical tree. However, as ANT scholars like Callon (1998) and Star and Griesmer (1989) have illustrated, what a network or system looks like depends entirely on where the observer stands. In other words, we ultimately live in a relativistic, not a Newtonian universe of systems.⁴⁷ MSNBC can be seen as the system that enrolls contractors like YuMe and Transpera to distribute its media products. But it can just as easily be seen as a component of a system put in place by YuMe, a mere content provider to be sold to advertisers. Or we may view advertisers

⁴⁷ In point of fact, Hughes’ (1987) writing recognizes that different systems exist simultaneously, compete, and even spin off from one another. The difference between Hughes’ and ANT scholars’ portrayal of systems, then, is less about how each understands or renders the universe of systems and more about what the different analytical frameworks *emphasize* about this universe and which elements of it they choose to grapple with most directly.

as system builders who enroll YuMe and MSNBC as mere tools for putting clients' commercials in front of potential customers.

This is why vantage point matters—as with frames of reference in physics problems, there is no single correct one, but many waiting to be defined in relation to the interest of the observer. What's more this is as true within an organization as outside of it. MSNBC can be seen as the system builder who enrolls a charismatic host like Rachel Maddow as a means of generating ad revenue. It can also be seen as the tool enrolled by Rachel Maddow in a system designed to reach audiences.

Once we recognize this relativity at the heart of organizational and systems analysis, it ceases to be surprising that large media organizations are full of groups with different interests, at times in concert and others in conflict. Each is a potential system builder. Each is a potential actor in, or force imposed on, another's system. It all depends upon the vantage point.

Moreover, whether a system is itself stable or unstable—whether the pressures on it are isometric—all depends on the vantage point from which the edges of the system are drawn (Figure 3.1).

As organizational scholars like Chia (1995) have come to understand, this realization ultimately challenges the very concept of the firm. If the edges of the system and of the organization are not the same, organizational boundaries become actor categories, rather than analytical tools: it is important to understand the work that they do for (or against) the system builder, but they are not themselves explanans. These observations are important keys, I believe, in understanding the nature of contemporary media systems generally, and online TV news distribution in particular. Moreover, they are best understood by way of exemplars, and it is with this in mind that I wish to examine a number of case studies of specific groups within MSNBC—to explore the same

network from the vantage point of different system builders, and to thereby gain a better understanding of how a postmodern media organization—in our new understanding of the term—operates.

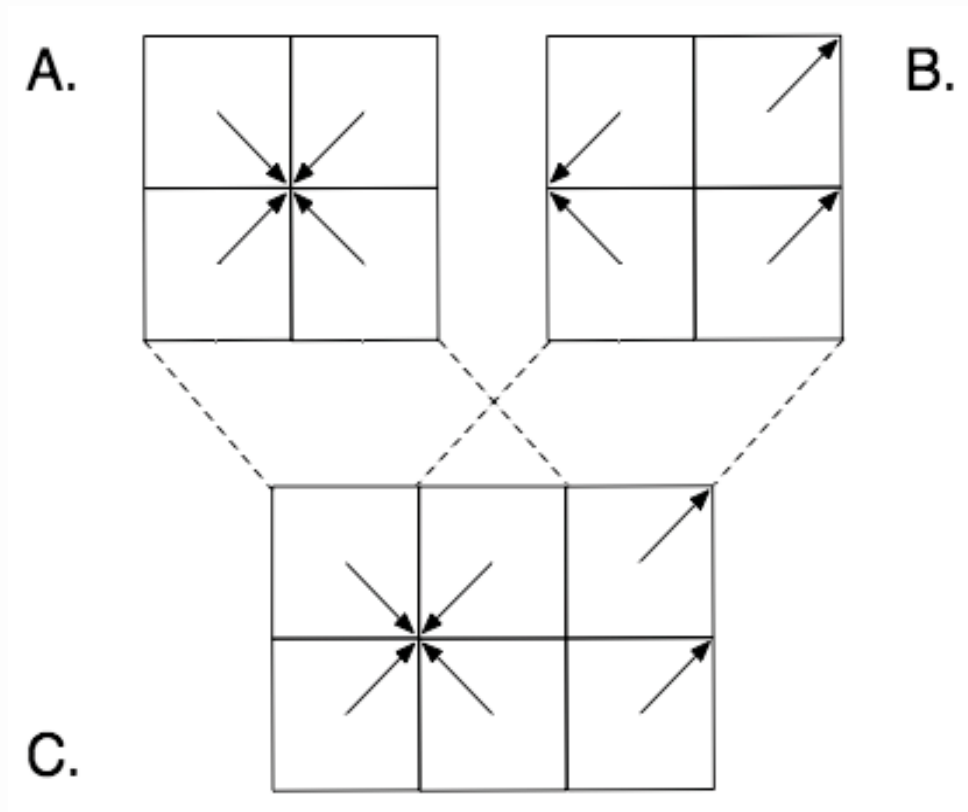


Figure 3.1 // (A) shows a system under isometric pressure and stable. (B) shows a system that is in flux under divergent pressures from the actors involved. (C) illustrates how the stability of a system is partly dependent on how its boundaries are defined—i.e., on vantage point.

Preliminaries

Newsvine.com is a news-themed social network founded in 2005 by a startup company of the same name. The startup was purchased by MSNBC.com in 2007, and was the first-ever acquisition by the joint venture. Since that time, while the original Newsvine.com site has remained relatively unchanged, the company's role within MSNBC.com has expanded substantially. Today technology developed by Newsvine powers all of the blogs and nearly all of the user-community features on MSNBC.com, as well as the extended MSNBC Digital Network. Among the pages that Newsvine powers are a number of blogs that now constitute the homepages of most of MSNBC TV's primetime shows. In what follows, I will describe several phases in the evolution of this system of blogs and interactive technologies from the vantage point of Newsvine. This will be one lens on the distribution of television-related content online. Later in the chapter, I will swap vantage points, discussing digital distribution from the perspective of the staff working on MSNBC TV's The Rachel Maddow Show (known internally by the acronym TRMS) in New York. Unsurprisingly, TRMS' online distribution efforts are not limited to Newsvine technologies, and the digital distribution system will look quite different from this alternative vantage point. We will nonetheless retread some of the same events and technologies from this alternate perspective. Along the way I will also throw in additional views and accounts from other parts of MSNBC.com and MSNBC TV for added context. In doing so, as one of my first graduate mentors, Charles Bosk put it, my job will be to illustrate not which account is true and which are false, but how each can be true in its own way. This exercise, in which multiple vantage points and interpretations serve as lenses, bringing into focus different

aspects of digital distribution will serve, I hope, as a model for further studies of large media organizations.

Newsvine

To understand what Newsvine is and what it does, it's necessary to know a bit about where it came from. Many things about Newsvine changed between the time it was conceived and the time it became a functional Website. According to co-founder Calvin Tang, the initial concept for Newsvine was born on a dive trip he and founder-CEO Mike Davidson took to the Bahamas in 2004 (Tang, 2005, 2006a). Newsvine.com could have been brought to you by Disney. The site was, in fact, launched by a small team comprised predominantly of developers who had previously worked on prominent Disney-owned Web properties, including ESPN Fantasy Sports, ABCNews.com, and Disney-themed sites for kids, all of whom left the company in 2005 to form their own start-up. In an October 2010 interview Mike Davidson, Newsvine's founder-CEO, described the decision to attempt the project independently, rather than in his role as manager of media product development at The Walt Disney Internet Group:

I think the moment that I realized I had to leave Disney to do this was when we helped ABC News out with a redesign. We took great pains to design their new site with Web standards in mind and all the new CSS techniques that were becoming popular that were great for accessibility and for flexibility and speed of development. My team spent several long nights leading up to the release helping ABC News out with this redesign. They launched, like on a Friday, and I posted a blog entry on my blog saying how great it was and how this new site just launched, and how we're using CSS and web standards

and this and that. It got a lot of great comments; you know, over a hundred comments about how great the site was. Then I flew to Las Vegas for the weekend, and I came back, and [a senior executive at ABCNews.com] had requested that I be fired for posting that blog entry. More than just requested. Over the next few weeks he sort of insisted that I be fired. The reason was that according to him, employees are not allowed to speak about the products that they release. Everything is supposed to go through Disney PR. He was mad that somebody who had worked on the product was writing about it. And so, if you think about how bizarre that is, even back then in 2005, to do something like that, if you think about how much more bizarre it is today to prevent an art director or an engineer or a designer from writing a glowing post about work that you had just produced, it's pretty silly. When that happened, I kind of thought to myself, "You know what? That's my signal. That's my signal that this company is going to stay pretty far behind the times. And it's not worth it for me to try to develop this idea I have for Newsvine inside the company."

Origin stories like this one are inevitably incomplete, from a point of view, and colored by memory, but one thing I would suggest vantage point, as a research tool, prompts us to do is to look at what a particular system builder is trying to accomplish, which involves tracing the system out from their perspective. Davidson's position at Disney was a recalcitrant resource—while, from his perspective, it barred the creative control he needed to launch the Web venture he envisioned, it did offer him experience and connections. Whatever his complete rationale for ultimately leaving Disney, Davidson ran the idea for the site by several of his coworkers there

before the group ultimately decided to leave and incorporate on their own (Tang, 2005). Lance Anderson, Newsvine's director of front end development, described the earliest phase:

LA: I was working at Disney. I was working for Mike. He was my boss and came to me one day in October of 2004 and presented me with the idea of Newsvine. It was really very different from what it ended up being, I think. And he just presented it to me then, and we talked through it and after a few months decided to raise money and go for it.

JB: So what was the original concept, then? At least the way it was explained to you.

LA: You know, it wasn't really very—it was very undefined. It was kind of this idea of comments and being a place for citizen journalists to write and to break news stories.

You know, like—Like West Seattle, there was the shooting a couple days, yesterday or whatever over in West Seattle. And it's like if somebody was there and was kind of around the situation could break a story and be the first to break it, rather than relying on the traditional news sources.

Newsvine was founded amid a span of heavy experimentation with social news among technology startups. Following the notable success of several general interest and niche news aggregation sites at the turn of the millennium, including Google News, Yahoo! News, Slashdot, and Topix, news provision became a major area of online investment and innovation in the mid-2000s (Kopytoff, 2006; Peterson, 2006). In addition to Newsvine, the period between late 2004 and early 2006 saw the emergence of a host of popular and/or critically acclaimed sites including Digg, reddit, memeorandum, The Huffington Post, and Findory.

When Newsvine incorporated in 2005, with \$5 million in backing from Seattle-based venture capital firm, Second Avenue Partners (run by another ESPN.com alum, Mike Slade,

among others), the startup consisted of five staffers, including Mike Davidson as CEO, Calvin Tang as COO, Mark Budos as CTO, Josh Yockey as director of technology, and Lance Anderson as director of front-end development (Cook, 2005; Tang, 2006a; Thelwell, 2007). The concept of the project crystallized into an idea for a site where citizen journalism published by users would be aggregated and discussed alongside professional news content. Users would be able to rate the quality of articles and their votes, when tallied, would determine the placement of stories on the site's cover and section fronts. The result would be a constantly evolving news site on which the prominence of articles was gauged by quality, rather than source, leading to heightened exposure for the site's "citizen journalists"—far beyond what they would generally be able to obtain by publishing one-off stories independently. Whether the site would be dedicated to general interest or niche-specific news was a matter of some debate early on. For example, the team of former ESPN.com developers had a deep interest in sports, and the early success of several sports-themed Web startups of the time, including Seattle's own Scout Media, seemed to indicate that a site promoting citizen sports writing could hold a good deal of promise (Cook, 2005). This debate over just what sort of news site Newsvine should be dragged on for some time, and—since much of the code that allowed users to write and share stories would be the same irrespective of the subject matter—it wasn't until development had been going on for some time that the concept for Newsvine was finalized. Anderson recalls:

It wasn't until we were several months into development where we got to the point where we had to make a decision: Okay, is this going to be sports only? Or is this going to be a more broad approach? And we talked with our investors, and just kind of tossed it around and ultimately decided to make a more broad approach.

The site entered private alpha testing in December 2005 (Tang, 2005; Newsvine, 2005),⁴⁸ and was opened up to successively larger waves of beta testers before opening to the public on March 1st, 2006 (Tang, 2006a). Over the course of the beta and in subsequent months, the features and workings of site took on the form that is largely familiar to Newsvine users today. “Viners” can write their own blogs on the site, called “columns,” and post links to news stories from across the Web as entries in their columns; posting a link in this fashion is referred to in the Newsvine vernacular as “seeding” a story. Viners browsing the site can vote on the quality of stories—both original and seeded—as well as the quality of individual comments. As mentioned previously, votes are aggregated by the Newsvine software, which uses the resulting rankings to lay out the front page and other sections of the site with popular articles, as well as to boost the status of users who’ve contributed well-received material. To ensure that the site contains the latest breaking news (rather than waiting for users to post links to stories), articles from the Associated Press are also automatically posted to the site. But as with user-contributed posts, the visibility of AP stories is at least partially determined by member votes.

Engineering Newsvine

The Solution Stack: All the free stuff, but we didn’t want to skimp

Putting a system like this in place, of course, required a good deal of heterogeneous engineering. First off, there is a fair amount of financial uncertainty inherent in running a startup company that, in the Web world, can at times be reflected in the way sites are constructed by cost-conscious developers. To understand how this is so, some brief technical background will

⁴⁸ December 2005 was initially referred to as the first private beta test (Newsvine, 2005), but as the private beta was expanded to additional waves of users, the initial testing came to be referred to as an alpha test (Newsvine, 2006a).

be necessary. When discussing contemporary Web applications, developers will often talk about a “solution stack,” which is a way of referencing the various software components required for the application to operate. First off, just like a personal computer, any machine that hosts a Website requires the presence of an operating system before additional software can be run. Second, the same host computer must also run an additional software application that allows it to operate as a server, returning HTML files and other resources (i.e., images, stylesheets, and so forth) when they’re requested by a visitor’s Web browser. Next, many, if not most, contemporary Web applications also store data, such as usernames, passwords, comments, story content, and so forth in a database, which has to be accessed and written to via a third component of the solution stack known as a “database management system.” Fourth, and finally, Web applications make use of a “server-side scripting language” to assist in writing data provided by users and administrators to the database, and to display stored information in new and interesting combinations. While at the advent of the Web developers and designers generally wrote out the HTML markup for individual Webpages by hand, today this is generally done programmatically through the use of scripting languages, which can change the structure of a Webpage based on user input (e.g., Add a message such as “Thank you for submitting your comment.”), system variables (e.g., Display the current time.), database information (e.g., Display the top stories as ranked by the Webmaster.), and other sources (e.g., Display the latest stories from a specified RSS feed). For a given Web application, each layer of the stack can be filled by a number of available solutions.⁴⁹ For example, Apple and Microsoft both make server editions of their computer operating systems. Microsoft, IBM, and numerous other corporations make server

⁴⁹ It’s worth noting that some proprietary solutions require software from the same vendor at other levels of the solution stack. For instance, Microsoft’s IIS server software is generally intended to be run on a Windows machine.

software. There are multiple database systems and variants of the popular SQL database language produced by different vendors. And there are numerous server-side scripting languages, too.

In addition to the proprietary solutions offered by Apple, Microsoft, and others, there are also free, open source solutions available at each level of a stack, the most popular being a Linux operating system, Apache server software, the MySQL database management system, and any of a number of scripting languages, including but not limited to PHP, Perl, or Python.⁵⁰ Owing to the fact that all the parts are free to use and modify, this combination of solutions has become one of the most popular solution stacks, earning it the beguiling acronym LAMP (Kay, 2006). And while it may not quite be true that, as former MySQL CEO Marten Mickos put it, “everyone on the Web...that matters runs [LAMP]” (Brodkin, 2011), it has certainly become a common standard. Around the time that Newsvine was getting off the ground, however, LAMP—while it had some high-profile adopters, including parts of Google and Amazon—was far from the juggernaut it has since become, and was still considered by some to be a risky platform for running sensitive applications (Kay, 2006). Newsvine, as we’ve come to expect of heterogeneous engineers, threaded the needle in choosing its own solution stack, striking a balance between the cost-effectiveness of open source on the one hand, and the need for

⁵⁰ Python is used for writing many types of software, including desktop applications. Since Python is not specific to the Web, programmers who use it for Web development often have to add extra instructions to their programs that would be assumed in a largely Web-specific programming language like PHP. Python is still a popular scripting language for Web-development, however, and it’s often used in conjunction with “frameworks”—extensive pre-written libraries of code developers can borrow, which obviate the need for any extra Web-specific instruction. The upshot of this is that while you will often hear of sites written in PHP, when Python is used on a site developers will more often refer to the name of the framework, such as Django or Pylons. Frameworks for other scripting languages, such as Rails (a Ruby framework), have also become shorthand. In fact, time-saving frameworks are popular for many scripting languages, including PHP, as a means of speeding up development and organizing code more efficiently.

reliability on the other. Josh Yockey, Newsvine's director of technology and one of its founding members, explained:

SQL Server [Microsoft's proprietary database management system], actually, was the only part of the initial stack that we paid for. Obviously when you're starting a startup, you want to be cost-conscious. And so we did all the free stuff. We had Linux. And we ran PHP and Apache and so on. But for the database, we really didn't want to skimp. And MySQL, particularly at the time—this was five years ago—MySQL was not particularly stable and refined. And so we actually paid for a SQL Server license. We ran SQL Server at ESPN at pretty large scale for fantasy games. And so we were quite happy with that.

The decision to build Newsvine on this solution stack also had other implications going forward, as we shall see.⁵¹

The Initial User Base: Friends of mine, friends of theirs

It's been noted repeatedly that the culture and social norms of an online space are critical to its success in accomplishing the builder's objectives (Lessig, 2006; Reagle, 2010), and many arguably successful sites become popular for reasons other than those the builders originally envisioned. For instance, boyd and Ellison (2008), in discussing the initial growth of MySpace and its attachment to the independent music scene noted that, "while MySpace was not launched with bands in mind, they were welcomed" (p. 217). Similarly, celebrated venture capitalist Fred

⁵¹ For posterity, it's worth noting that large-scale Web applications, including Newsvine, also frequently involve several other components. To keep the load on the database manageable, there is often a caching layer—a bit of code that caches and serves up the results of common database queries, such that every user who loads a page isn't querying the database. Most contemporary Web applications also involve Javascript, code included with HTML pages that is executed by the user's Web browser, rather than the server, to allow sites to respond to user input in real time as a desktop application would. Several popular Javascript libraries exist for writing sophisticated Javascript features. Increasingly Javascript is used to pull new data off of servers without forcing the user to refresh a Webpage—this functionality is generally referred to as AJAX.

Wilson recently remarked that “Twitter wasn’t planned, it just happened,” in reference to the company’s continual efforts to adjust to trends set by their user base and third-party developers (Rao, 2011). Newsvine developers recognized early on that, in an environment where anyone could publish, it would be essential to start out with a community of thoughtful, pro-social users. This informed their selection of the initial user base who began using the site during the alpha and beta tests. Davidson recalls that “One of the things about Newsvine is that it was a self-selecting community from the start. The people who were there during the alpha were friends of mine. The people who were there during the beta were friends of theirs.” The importance of starting with a selective user base was emphasized on the Newsvine blog, where the staff posted announcements and development news. Upon the announcement of the alpha test, the blog read,

Quality of conversation is often tough to maintain in open expression forums (see “Slashdot” :)), but as long as we’re judicious about getting the right sorts of people involved, discourse should be more like a college classroom and less like a college hockey game. (Newsvine, 2005)

As is now relatively common with closed betas, a month later, when the initial beta test began, users were given a limited number of invites to share with friends, each of which would admit a new user to the site. Through the invite limit, and more explicitly through the Newsvine blog, users were instructed to be selective in who they invited to the site. These restrictions were coupled with a monetary incentive for inviting productive users by way of the site’s revenue-sharing program, which will be explained in further detail later on:

[W]e’ve given every Newsvine member the ability to invite 20 of their friends into the community. As the inviter of any new member, you’ll receive 10% of the ad earnings

from any traffic they generate. Here's the rub, however: by inviting someone into Newsvine, you are implicitly endorsing them as a potential positive member of the community. This is not only a great way to control growth during Newsvine's early stages, but it also helps keep the spam and the trolls out. We'll eventually dole out more slots, but 20 is the number for now. (Newsvine, 2006a)

Similarly, the site's COO, Calvin Tang posted to his personal blog, read by many of the alpha testers that,

Since Newsvine is a meritocracy whereby people discover great things based on endorsement by other users, one of the most important things any user can contribute is a wise choice on who to invite into the The Vine. (Tang, 2006b)

At this point, we can begin to appreciate the amount of heterogeneous engineering that went into assembling Newsvine's initial core user base. The developers relied on their personal social ties to find an initial high-quality group of users. Subsequently they used a combination of social engineering (verbal guidelines for invitations), technological restrictions (limited numbers of invites), and financial incentives (revenue sharing) to ensure both the quality of the expanding user base and its rate of growth, which in turn made it more likely that existing users would remain and/or have an opportunity to become acquainted with one another, minimizing the sort of bad behavior that often comes with online anonymity, and hopefully facilitating the formation of a self-policing community.

The Public User Base: An aspirational philosophy of user behavior

Of course, once a site oriented around user-generated content is open to the public, the builders face two major challenges: acquiring and surfacing high quality content on the one

hand, and keeping out malicious or illegal behavior on the other. These are not unrelated problems—after all, if the featured content on a site is laughable, the whole enterprise is less likely to be taken seriously by users and critics, putting the site at increased risk of trolling. At the same time, extensive spam and trolling can drive away users and their potentially valuable contributions. Even during the closed beta period of the site these were pressing concerns among Newsvine developers. Lance Anderson recalls,

“I ate chips and salsa” is a one-liner that we use around here. Because the first week—it might have been the first day, but the first week into private beta, which was six, eight, ten thousand users, something like that—there was a story on the front page and the headline read, “I ate chips and salsa.” And you’d click on it, and then there’s one sentence and a picture of, like, chips and salsa. And it was, “Featured Writer,” you know? And it was like, “Oh, God. Our site’s going to—We’re just going to fail so miserably.” It was just like—It was like that punch in the stomach, you know, where it’s like, “Oh, no. We’re going to be so bad.”

The development team strategized aggressively against this possibility through numerous avenues over the course of the beta and the site’s first year of operation. As indicated previously, Newsvine initiated a revenue sharing program that not only gave users a portion of the ad revenue generated by the content they contributed, but also offered them a cut of whatever ad revenue was generated by the users they referred, thus encouraging viners to both contribute good content and to find other high-quality users. (Cook, 2005; Newsvine, 2006a).

A fundamental technological element designed into the Newsvine site, as with other social news sites, is that it increases the visibility of stories and comments based on user votes.

In the case of stories, this is done by populating the cover and section fronts (e.g., U.S., Sports, Politics, etc.) with highly rated material and, within stories, adding quick in-page navigation links to highly rated comments.⁵² The site also includes technological countermeasures against abuse and questionable use cases. For instance, the Newsvine software contains a profanity filter, which finds and replaces any of a library of objectionable words with grawlix whenever a user posts content.⁵³ The software likewise prevents virtual shouting by prohibiting viners from typing in all-caps. There are also technological countermeasures in place to weed out spambots and malicious users as soon as they attempt to join the site. Users who begin their career at Newsvine by contributing links from a list of sites deemed “questionable sources” by Newsvine, by linking the root of a site (e.g., <http://mashable.com>, as opposed to an article page on mashable.com), or by posting too many links to the same Web domain in rapid succession are algorithmically flagged as potentially malicious users. Josh Yockey outlined the nature of the site’s filtering software:

On the technological side, the first layer is automated reporting systems. So if somebody comes in with just straight spam or something offensive or whatever, then it tends to quickly get reported. We also do some really, pretty simple, naive content checks. We do some user segregation by level of trust. So if you haven’t confirmed your email address with us you’re less of a trusted user and you can’t post any links. So that gets rid of a lot

⁵² On Newsvine, users can only vote an item up, not down. Though—as we’ll see—they can report an item as abuse.

⁵³ As with other features, like voting on content, I don’t wish to portray this functionality as alien or unique. I feel it’s possible, and important, to be analytical about the inclusion of features and functionality without pedantically describing common items as though we’d never encountered them before. At the time of this writing, for instance, many of the most popular forum services and software packages include similar profanity filters, including ProBoards, Simple Machines Forum, and phpBB, as do major news providers (in their comment threads) like CBSNews.com, and public-facing portions of major social networks like Facebook.

of automated spam. [Most automated spam software] doesn't bother going through any steps. Because there are so many other sites where you can just post a link and get away with it. So even if you put up a pretty minimal barrier, they won't bother. Or they'll try and fail and not even notice. Most of that's "fire and forget."

The "levels of trust" Yockey mentions are in reference to Newsvine's moderation technology, which contains a fairly nuanced array of tokens and states—corresponding to specific privileges and restrictions across the site—to which users can be assigned.

The moderation system, however, is only one part of a composite and evolving solution for managing the user base. One important reason that heterogeneous engineering gives us such an apt vocabulary for discussing a system like Newsvine is that many of the most important components of user management on the site are not technological actors at all. When Newsvine began in private alpha among friends of the staff, it had few strict user guidelines. When the alpha was announced in the Newsvine blog, the first comment beneath the post began, "The only thing that I don't really understand is what kind of posts are you expecting? Is there any kind of guideline? Can I write about anything or only news related?" Davidson replied that

[W]e definitely need some posting guidelines, but we're going to lean towards posting anything you **personally** find to be newsworthy. We'd like to minimize the amount of "I just walked my dog" sort of posts, but you can't really tell people what to post. I think once there are a ton of people using this, it will kind of sort itself out via the voting. As in, the more widely read your posts are, the higher up they will go in the vine. (Newsvine, 2005)

When these guidelines were ultimately published upon the public launch of the site in March of 2006, they took the form of a sort of legal-philosophical document called the Newsvine Code of Honor. The Code of Honor (CoH) was developed by the Newsvine staff in cooperation with users during the private beta. The initial invitation for users to contribute suggestions for the document projected that the CoH would consist of “about 10 common sense guidelines for people to follow when interacting within the community:”

By having a common sense code of honor in place for all to examine and heed, we feel we can help avoid the problem of people treating the community as an open playground.

Thanks in advance for your submissions and consideration. (Newsvine, 2006b)

Ultimately, the staff assembled a list of six pithy guidelines (Newsvine, 2006c), written by COO Calvin Tang, and in 2008 five of these⁵⁴ were fleshed out into the language that remains today:

(1) Above all else, respect others. Address issues and arguments and refrain from making personal attacks. If you see something disrespectful or inappropriate, report it—rather than further inflaming the situation.

(2) Newsvine’s primary purpose is to provide a place for people to share and discuss topics relating to the news. Self-promotion, seeding links to your own site(s), and advertising are not allowed.

(3) Headlines should be supported by the information presented in the article/seed, rather than used primarily as a means to draw attention. Articles and seeds must be published to appropriate groups and categories. Tags must be relevant to the article or seed.

⁵⁴ I will revisit the sixth clause and its fate later on.

(4) As the host of your column, you are expected to foster healthy, open discussions by setting a good example. Be responsible for the content you submit and exercise impartiality when deleting comments and reporting abuse.

(5) Acts that run contrary to the spirit and purpose of Newsvine, including attempts to circumvent the Code of Honor & User Agreement, are not allowed. (Newsvine, 2008b; Newsvine, 2008c)

The Code of Honor served three major purposes. First, it provided users with guidelines as to the sort of activity that was acceptable on the site. Second, it was an easily referenced set of rules that Newsvine staff could point to when moderating content, disciplining users, or deleting offending accounts. Finally, and perhaps most importantly, it was intended to provide the basis for a *self*-policing user community. Yockey explains,

Early on we had a sort of aspirational philosophy about user behavior. We found that users sort of reflected back behavior that you—I would say if you’re respectful to your community, then at least some critical mass of your community will be respectful back. Some sites are much more cynical about user behavior and they just start in the assumption that users are all a bunch of foul-mouthed trolls. The obvious one [example] is comment moderation, where a comment won’t even show up until a human sees it. You know, I think users are, if not consciously, then at least subconsciously sort of insulted by that and think, “Well, if you think we’re just a bunch of foul-mouthed trolls, then I guess I will be.” Whereas on Newsvine, we do have technological controls—users can report other content and stuff—but we put a lot of faith in our community guidelines. And we actually set up what we called the Code of Honor. Which is some guidelines

about how respectful one should be in one's conduct when participating in the Newsvine community. And obviously it didn't constrain everyone. There are obviously hardened trolls and there are people who don't understand the thing and people who have short tempers or whatever. So there's all kinds of situations that it doesn't cover. But on average it was actually extremely helpful, because the community sort of policed itself when it had a document or some guidelines to go by. ... And once you codify those standards, then people are willing to defend them. So the non-technological side took care of a lot of it for us. We were almost surprised at how eagerly people took to self-policing.⁵⁵

While Yockey makes the case here for respectful treatment of users, it's important to note that Newsvine's design/policy, whereby viners are allowed to publish instantaneously and objectionable material is taken down after the fact, is not just an editorial or regulatory philosophy—it is also a labor saving strategy without which it would be impossible to maintain the site with a staff of less than ten people. In my first phone conversation with Mike Davidson, he elaborated on the dual nature of this policy of moderation-after-the-fact:

The quickest thing that can kill a conversation is a delay in publishing. If you're going to carry out an online conversation with other users online, you can't wait four hours or twelve hours or twenty-four hours for your comments to be published. I mean, we have threads where five or six users will be discussing something for three days, you know? And it's back and forth, and back and forth, and people are publishing comments sometimes five minute apart from each other. If you kill that, you kill discussion. I look

⁵⁵ Yockey also aptly compared the social and administrative role of the CoH to the list of basic policies and guidelines on Wikipedia that's been examined by scholars like Geiger (2007), Black et al. (2008), Slattery (2009) and Reagle (2010).

at pre-approval of comments as almost giving up, really. It's sort of like saying, "We think we need to have this kind of commenting thing going on, but we don't like the quality of comments that are going on, so we're going to approve things instead." I don't think it's a good user experience. I don't think users appreciate it. It's just something that some sites apparently think they need to do. I mean, we have one moderator on staff. That's it. He's sitting about 25 feet from me right now—he just gave me the shaka sign. We moderate tens of thousands of comments every day with one person, and the reason we're able to do that is he isn't going through and reading every comment every day. What he is doing is he is responding to user reports of bad behavior on the site, and he's checking out certain high-volatility threads, popping in, slapping people on the wrist, giving people suspensions, giving people encouragement—all sorts of things. We feel like that's a lot more useful way to encourage the sorts of behavior that we like to see around the site.

This form of moderation depends on outsourcing the discovery of unacceptable and malicious behavior to the site's myriad users—a social form of the open source developer's mantra, "given enough eyeballs, all bugs are shallow" (Raymond, 2000). At this point we can begin to understand the Code of Honor and the policy of after-the-fact moderation as heterogeneous actors in a system aimed at making a user base that includes over a million registered accounts manageable by a single moderator.⁵⁶ But to enroll users in the task of moderation requires additional policies and technological actors that we've yet to explore. First of all, users must

⁵⁶ I should add some context to the notion of a single moderator. While Newsvine has a dedicated moderator, Tyler Adams, COO Calvin Tang also played an active role in interacting with the user community until his departure from the company in 2010. Newsvine hired a second full-time moderator shortly after my fieldwork was complete. An avid user was also hired some time ago as a part time employee, and shares in some of the moderation duties as well. The general point, however, is that moderation duties on Newsvine.com have always been, and continue to be, carried out by a relatively tiny group of individuals.

have a way to report abuse on the site. When users are logged into Newsvine, they can delete offensive comments on their own stories. Moreover, every story and every comment they see is accompanied by a form button labeled with an exclamation point, which allows users to flag the story or comment as a violation of the site's policies. Clicking it brings up a context menu of possible conduct violations, which once selected will send an automated abuse report to the Newsvine moderator. Users can also use the site's universal contact form to file reports of abuse and malicious behavior on Newsvine.

Moreover, even when crowdsourced, moderating after the fact only makes sense if a site's proprietors don't knowingly let malicious actors into the site to begin with. Assuming good faith is an admirable policy for legitimate columnists and commenters, but it quickly breaks down when applied to spambots, trolls, and black-hat SEO marketers. To keep these pressures at bay, the site requires users to register before posting, and as we've seen employs a number of algorithmic filters to flag potentially abusive users and content. But by themselves these filters would not be enough to stop malicious accounts—for instance, even if a malicious account is flagged for review after one post, a few spambots creating accounts *en masse* could still overwhelm the site with junk content one post and one account at a time. To prevent spam algorithms from taking over the site, and to add an obstacle for users who would register for the sole purpose of posting something unsavory, Newsvine created a quarantined section of the site, which they dubbed “the Greenhouse.” In principle (exceptions have been introduced, as we will see), any user who registers for Newsvine is initially untrusted by the software. This means two things. First, any blog posts they publish to their Newsvine column will be skipped over by the algorithms that normally promote content to the cover and section fronts across the site based on

user votes. These posts will, however, be featured in the dedicated section of the site called the Greenhouse. Second, while untrusted users are allowed to comment anywhere on Newsvine, any links included by these users in their comments are automatically removed by the system. Newsvine's full- and part-time moderators regularly visit the Greenhouse, deleting posts and accounts from blatantly malicious users and spambots, at times blocking their IP addresses when they register repeatedly. At the same time, moderators will elevate apparently pro-social users to trusted status on the software, and explaining Newsvine's Code of Honor to individuals whose contributions are unacceptable by site's standards of conduct, but clearly not malicious. Existing Newsvine users can also visit the Greenhouse and report abuse there or vote for articles they like; enough votes from trusted users on a novice's seeds and articles will also tell the software to graduate the new user from the Greenhouse.

The Greenhouse accomplishes several things for the Newsvine system builders. First, it keeps malicious accounts and any content they generate from wreaking havoc on the site's article recommendation system or otherwise severely impacting areas of the site frequented by the public or relied on by trusted users. Second, because it minimizes the exposure of malicious posts and intervenes in the posting of spam links to the comment threads of existing content, it reduces the incentive for spammers and trolls to target Newsvine in the first place. At the same time, an automated system that divided users into trusted and untrusted groups could presumably be created without a section of the site dedicated to *featuring* content from untrusted users, which begs the question, why have this portion of the site at all? The answer is again that it contributes to the desired social environment on Newsvine. The Greenhouse is promoted to users as "a section where new users are featured for the community to discover and endorse" (Newsvine,

2008a). When it launched, the Newsvine blog declared it one of the few positive outcomes of the unfortunate need for a trusted user system:

The upside of this, however, is that we can now feature all new writers in one area: “The Greenhouse.” The Greenhouse is the best way to help identify new positive members of the community and even add them to your Watchlist⁵⁷ if you so choose.

As Tyler Adams, Newsvine’s staff moderator put it, “the Greenhouse is...pretty valuable as a training ground” for new users. Ideally, being featured in the Greenhouse gives new and still relatively anonymous users an elevated level of attention and positive feedback upon joining the site, and provides a safe area where new users can become acquainted with the norms of the site before their content enters the community at large. It also puts a positive spin for new users on what might otherwise be considered a delay in their exposure akin to the sort of pre-moderation Davidson derided earlier.

But the systems Newsvine has set up to inculcate users into a desirable—and regulable—normative framework don’t end with the Greenhouse. Some of these efforts are conducted through events on the site. For instance, in 2010 Newsvine organized semi-formal debates between users as models of civil conversation in an initiative called “Newsvine Next Level” (Tang, 2010). Others take the form of live events—over the years, users have organized meetups across the country, which the staff have encouraged and at times attended. Others take the form of technological elements of the site, such as Newsvine’s karma system, “Vineacity,” which Mike Davidson explains:

⁵⁷ The Watchlist is one of Newsvine’s following mechanisms. On the site you can friend users and join groups, as you’d expect from a social network. However, it’s also possible to subscribe to content from an author or group on the site without designating the user as a friend or joining the group. The latter method of following is referred to as “Watchlisting.”

We have registration in front of our site. ... I think you want everybody to be tied to an identity. We aren't so much concerned that you're using your real name, but we want you to use a name that you are known by, that will rise and fall with the quality of comments that you leave. We also have a system called Vineacity that rewards you for doing different things on the site. So there's six Vineacity branches that you get [which are added to an illustration of a plant, displayed as a badge on each user's profile; see figure 3.2]. The first branch is the courtesy branch. If you have more positive feedback than negative feedback you get the courtesy branch, so that's kind of a freebie. Don't be a jerk on the site and you get a free branch. The second branch is the longevity branch. So, if you've been on the site for three months you get the longevity branch. Also kind of a freebie; just stick around and you get it. The third branch is the fruitfulness branch. The fruitfulness branch you get when you have posted a certain number of comments or articles or seeds to the site. The fourth branch is the connectedness branch. The connectedness branch you get when you have a certain number of friends on the site or have a certain number of people following you. The fifth branch is the lifetime achievement branch, which you get after you've reached a very, very high level of contributions. All this is automated. The sixth branch is the only one that's not automated. That's the branch that we call the "Random Act of Vineness." We give this out editorially for moments of greatness on Newsvine, or within the Newsvine community. We had a user organize a cancer walk around a track in the middle of the night in Ohio, and he raised thousands of dollars for cancer research. ... We had another user get their name on the ballot for the Ohio Senatorial race, and he documented the

entire thing on Newsvine. He got a branch for that. So, those sorts of things we like to kind of reward, above and beyond other things that occur on Newsvine. But, you know, we try to create this culture where people are concerned with their reputations around the site. We do not want a drive-by culture where people think they can just kind of pop into Newsvine, sound off and then pop back out again.

In Davidson's explanation, we once again encounter a heterogeneous elements, wherein technological components like registration of user identities and the Vineacity karma system are paired with a policy initiative—the Random Act of Vineness (RAV)—to promote a desirable normative structure for the site's user base. For instance, RAVs have been awarded for contributions to the Newsvine community, such as to a group of users who systematically help to report spam postings to the moderation staff. It's also been given to users who have embodied the site's aspirations to citizen journalism. The story of the 2007 Virginia Tech school shooting was in fact broken by Newsvine via Chris Thomas, a user whose wife worked at the school; he later received a RAV, as did Sandy Frost, a Seattle user who, through Newsvine, published an investigative piece on the Shriners that received recognition from the Society of Professional Journalists.

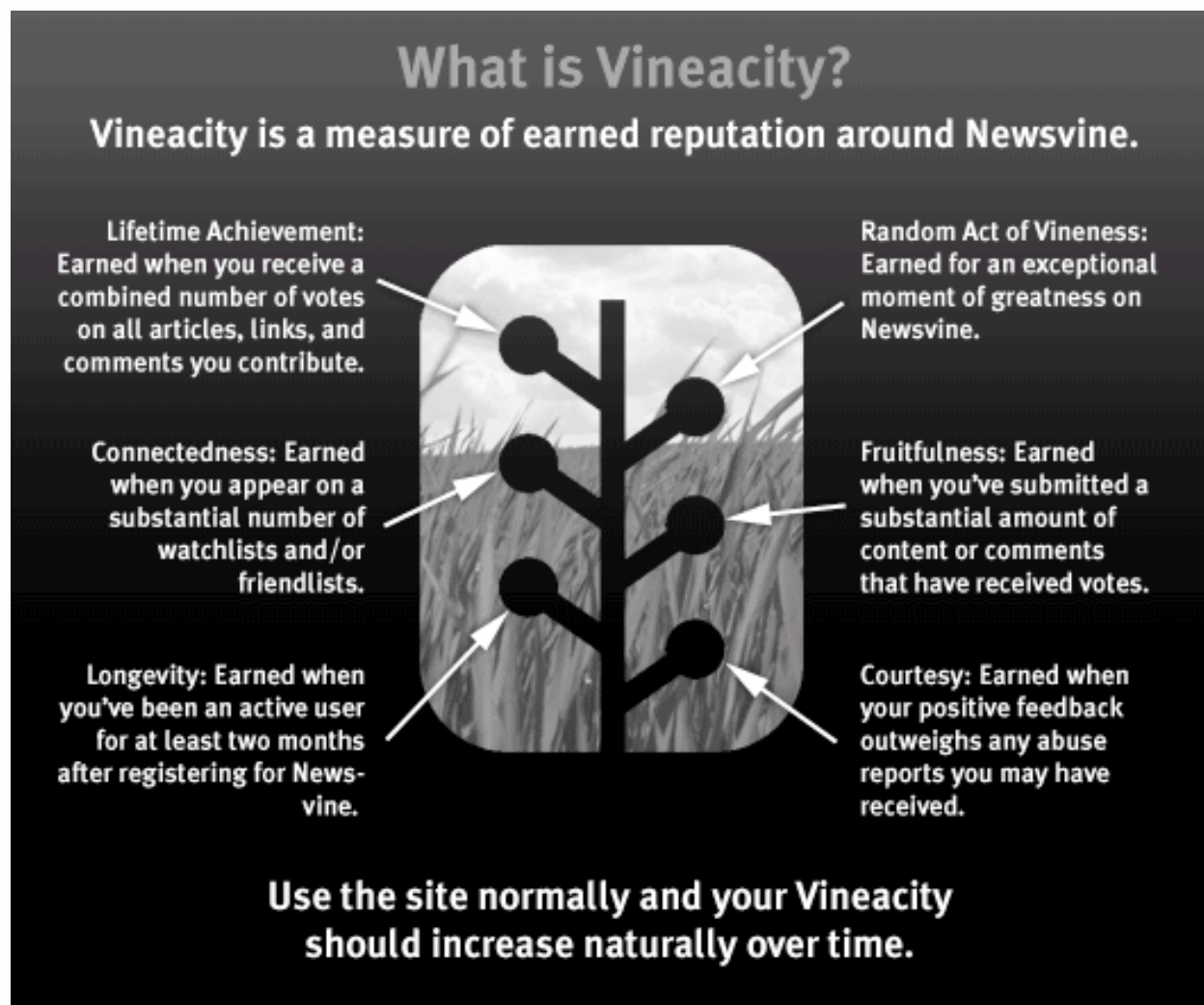


Figure 3.2 // Vineacity Illustration

A smaller, less colorful version of the icon explained in this Newsvine illustration appears on each user's profile, displaying the branches she's earned.

Moreover, Newsvine has intentionally limited its user base in correspondence with its ability to moderate and socialize them. The sixth original clause of the CoH, which admonished users to post only in English, was not eliminated, but rather ultimately moved to the more labyrinthian site user agreement. It is still the site's policy today. As Yockey explains, the prospect of a multilingual Newsvine was actually quite thrilling initially, but ultimately unsustainable:

[A] defining moment was seeing somebody write an article in Arabic, which just worked—I mean, we were using Unicode. We didn't really anticipate it, we just, you know, wrote everything reasonably internationally friendly. And sort of without our planning it, some guy wrote an article in Arabic—which I was super-for. I was always for international reach. But eventually, I kind of got overruled. We decided that since we couldn't moderate in every language, then we should stick to English. Even though it was mostly user-driven we do provide some moderation function. We try to keep flame wars and spam and stuff out, and we just couldn't do that in Chinese or Arabic or whatever. So, rather than lowering our moderation standards, we just stuck to English. But I thought it was cool just to see some Chinese and Arabic articles in the first couple days.

This decision to limit the potential growth of Newsvine in accordance with the ability of the developers to understand what its users were saying underscores the importance of social engineering on Newsvine. If aggregation of votes was enough to make the site work in accordance with the builders' wishes, then having a multilingual user base would be moot

provided enough users existed for a particular language to moderate corresponding articles effectively. But the technology of Newsvine, as we've seen time and again now, depends on the establishment of a prosocial use culture. As Law (1987) would point out, it ultimately makes no sense to separate the gadgetry of Newsvine from its social predicates—or its financial or policy ones, for that matter. Only together do the various parts constitute a working technological system—this, again, is the essence of heterogeneous engineering.

Of course, unruly behavior does occur on Newsvine, and as Yockey highlights above, moderation is necessary. As we've seen, the Newsvine staff have employed heterogeneous mechanisms to create a social environment in which the users themselves take on much of the work of policing the community. Parts of this process are automated—for instance, when enough users report a story comment as abuse, it is automatically “collapsed” by the system, meaning that the text of the comment, while not removed altogether, is hidden by default (users who wish to read a collapsed comment can click its heading to reveal the text). As the site moderator, Tyler Adams described it,

The reporting tools on Newsvine can collapse comments, meaning that the comment is viewable if you click on it. And collapsing a comment sends me an abuse report. And you can also bring down articles with enough reports. And the amount of reports changes as the article gets—it takes a lot of reports to bring down an article with a lot of attention and eyes on it, because there's a fair ratio.

It's worth noting that the comment collapsing algorithm itself is a heterogeneous product. When debates get heated, some comments may simultaneously be voted up by some users and reported as abusive by others. Creating a collapsing algorithm that intelligently weighs the balance of

votes for and against a comment is a tricky challenge, simultaneously technical and social. Law (2002), in examining the engineering equations behind contemporary aircraft design, underscored the manner in which equations that on their face purported to simply explain the physics of lift, wing contouring, and airspeed, were ultimately as much or more about the comfort and safety of crews and pilots. In his story, a neat, concise equation for acceptable values of “gust response” appears deceptively simple and technically oriented at the end of the day, hiding the range of concerns that went into its production:

Removed from the flat space occupied by the formalism, we find ourselves in the sweating world of the aircrew. We discover pilots who flew their creaking aircraft too low, pilots who worried about whether the wings would break off, pilots who were thrown about their cockpits, pilots who climbed shaking from their aircraft at the end of these flights. If we are imaginative, then perhaps we can smell the fear, feel the sweat on the bodies, the taste of vomit. (p. 123)

Latour (1990) refers to this process, through which the messy and diverse world of experience is reduced to an equation, an engineering diagram, an algorithm, as *deflation*. While Newsvine is far removed from the life and death world of experimental aviation, we can similarly understand moderation algorithms as concealing a great deal of hard won experience, and containing within them a set of working assumptions about fundamentally social problems: the extent to which controversy should be tolerated and/or valued in discourse, what a constructive debate looks like in aggregate as opposed to a messy argument, as well as the nature and values of the community flagging and voting on those comments. They are thus heterogeneous technologies. Automated moderation systems at times seem deceptively simple, but thinking about them in this way

reveals a surprising amount of complexity at work. The same is true of the site's algorithm for featuring comments that have been highly rated by users—setting a threshold for how many user votes make a comment “highly rated” takes a good deal of knowledge about the site's dynamics. Set the threshold too low on a high-traffic site and the “highly rated” moniker ceases to have meaning. Set it too high and the reverse is true.

Still, even with the myriad financial, technological, and administrative choices we've encountered thus far, aimed at socializing a responsible and productive user base, some moderation must, in the end, be done by human staff. Newsvine has a number of moderation tools accessible to staff, including all the standard tools you'd expect, such as the ability to delete comments, articles, and user accounts. The moderator can also manually feature a comment, adding it to the list of those highly rated by users, or manually collapse it. And s/he can manually restore comments and articles that have been collapsed by the community. In addition to these basic tools, the moderator also possesses a more nuanced set of options for dealing with problematic users.⁵⁸ S/he can grant or revoke trusted status from users; suspend a user from logging into the site for a specified period of time—a day, a week, or a month; or ban them indefinitely, in which case their existing content remains intact, but they are unable to use the site. After banning a user indefinitely, the moderator can also, if s/he chooses, delete their account, removing all traces of their content from the site. Alternatively, users can be “quarantined,” meaning that their trusted user privileges are revoked, and their activity while in this state is limited to their own column (e.g., the viner can comment on her own stories, but not

⁵⁸ There are a small number of moderation tools at Newsvine that only work if they are not made public; per the request of the Newsvine staff I will refrain from describing these here, as they are not necessary to the discussion and tend to follow the more general pattern of observations in this chapter—e.g., the salient points here can be made without their inclusion.

those written by others). Users can also be assigned “tokens” by the moderator, which grant or revoke specific privileges on the site. For instance, there are tokens to give users access to specific beta features not yet available to the larger user base. There is also a token for viners who abuse the site’s user-moderation features, which prevents them from deleting comments or filing abuse reports. A staffer can also use the moderation interface to send emails to offending users, explaining why changes have been made to their accounts, and has the option of sending an automated blast specific to a given action or offense, or alternatively writing a more personalized note. The moderation interface also aggregates a range of information about viners, collating the abuse reports they’ve filed as well as those that have been filed against them, and displaying over 20 statistics about the user account, including the number of stories the user has published, and how many have been censored or deleted.

Newsvine as a social/technological system doesn’t work perfectly to engineer user behavior, of course. Tyler Adams, the site’s full time moderator, described problems from time to time with what he jokingly referred to as “Newsvine gangs”—cliques of likeminded users who coordinate through back channels to systematically game the site’s collapsing algorithm and bring down the articles and comments of their ideological opponents. As moderator in these cases, he would often have to engage in a fair amount of detective work to discern who was participating in such bad faith behavior and ban or suspend them from the site. And users at times will attempt to game not only the site’s technology, but also its policies. Adams recounted numerous ways in which viners would at times pay close attention to the letter of the law, when it came to the Code of Honor, while violating its spirit:

[N]umber three of the Code of Honor that says that headlines must be an accurate summary of the seed. The most blatant one [example of gaming the CoH], and one that someone just got banned for because they had done it too many times is, last week Obama called on black lawmakers to “fire up” for the election cycle. Just sort of a stump speech that says, “Go help Democrats get elected.” And someone seeded that with “Obama plays the race card again” as their title. And the article itself is an AP article. It’s just a straightforward news report of what he did and what he said. And, that article by the time I got to it, I think had 30 comments in about an hour. And it’s because of that headline. And if you want to go find an opinion piece—because someone has probably already written that, someone on a conservative blog has already interpreted that as being the race card. You could probably find a title very similar to that and go seed it—I may not want you to, because it may not be the best quality. But you’re welcome to go do that. And that’s one of the most traditional things is taking a headline and then really skewing it. The thing is oftentimes headlines are actually pretty bad. And sometimes people will re-title them with things that are actually a much more accurate reflection of what’s entailed. But that’s a really common one. And then the other common one is tag abuse. Newsvine—one of my very favorite things, that blew my mind when I arrived at Newsvine is Newsvine.com-slash-anything is the tag page for that. Newsvine.com/Mariners, [/pollution](http://Newsvine.com/pollution), [/BP](http://Newsvine.com/BP). And so, occasionally you’ll get people putting in fifty tags [into an article] to try to get on all those pages. And so there are some really common instances of system gaming. And then there are some that are a little bit more sinister, where people go around and comment elsewhere and link back to their column. And

that's a little bit tricky to handle, because sometimes it's relevant to the subject. But we have a self-promotion clause that—number two of the Code of Honor is “no self promotion, no links to any sites that you're affiliated with.” But everyone on Newsvine is affiliated with Newsvine. So it's a matter of whether they're overdoing it. I remember one user was commenting on a hockey column and linking to their politics page. And I was like, “Okay, this is officially advertising.” And I think when it comes to gaming number one, which is “Above all else, respect others,” the people who are most effective at poking other users until they react are the ones who recognize that it's okay to attack other people's content. But then they take it a little bit too far and just repeatedly write paragraphs upon paragraphs about how stupid the content is, and then people take it personally and fight back.

Against cases like these, you may recall, the Newsvine staff have been careful to include the CoH's final clause, a catch-all reading “Acts that run contrary to the spirit and purpose of Newsvine, including attempts to circumvent the Code of Honor & User Agreement, are not allowed.”

At the other end of the spectrum, however, are users who've fully invested in the norms of Newsvine and do work to enhance the quality of its community. One user wrote a browser plugin that automatically filtered Newsvine comment threads, preventing low-quality comments with characteristics of spam from appearing in the user's browser. These “client side” filters proved effective enough that some of them were apparently adopted by Newsvine itself. Other users formed a group, “Newsvine Anti-Spam,” on the site dedicated to searching out spam postings across the site, aggregating them, and bringing them to the attention of the Newsvine

moderators. An Australian user went so far as to build an independent Website called GLoS, or “Giant List of Scum,” dedicated to fighting Newsvine spam. It is accessible only by Newsvine moderators to whom s/he gave special login privileges, and contains a searchable database stretching back to 2006 of tens of thousands of user accounts the site owner has flagged as malicious. The list of flagged accounts is categorized by type of violation (e.g., “spambot,” “troll,” “seo,” “advertising,” etc.) and contains notes as to the malicious activities in which the user is engaged, a status message indicating whether or not the issue has been addressed, and the date the account was flagged. It also contains links directly to the moderation view of each account, allowing Newsvine staff moderators to jump straight from the site to the account deletion tool on Newsvine for each user. While Newsvine’s moderators review the violations alleged by the Anti-Spam group and GLoS, they have found them to be so reliable in general that reviewing the recommendations of these users has become a major part of the Newsvine staff’s regular moderation routine. Still other users have created initiatives, such as the “Summer Writing Challenge,” to encourage valuable contributions to the site. And while attending to the Greenhouse has, in practice, largely fallen to moderators rather than users—partly as a result of its role as a buffer for marketers and spambots—many users nonetheless assist in educating new registrants. Last year, the Newsvine staff added an extra bit of technical infrastructure to further encourage this behavior, creating a “Newsvine Guide” token and a corresponding badge, visible to other users, denoting holders as being particularly experienced and helpful. Adams recounts,

Guides was something I’d been pushing for for awhile when we implemented it. One week I saw that one of those users [who was later named a guide when the program was instituted] had just sort of dropped off to the side. And, like, I went back there was a

string of [instances] where she was really giving great advice to new users and the new users were like, “Don’t tell me what to do.” And I was like, “You know, that person really deserves more than that.”

Elsewhere, he explained further:

[The people that were named Guides] were doing what they’re doing now for years.

We’ve had just long-time users who are spam busters, who really care about the welfare and wellbeing of Newsvine, and go around teaching and evangelizing. And we wanted—especially with the influx of new users—we wanted some sort of designation that would alert new people, or people who would be more likely to just brush off advice from anyone, that this was someone you should listen to, someone worthy of respect.

Guides is yet an excellent example, not only of heterogeneity in the sense of how technologies are used to support and encourage desirable behavior on Newsvine, but of how this process is dialogical. Technologies are not simply put in place to direct the emergence of desirable norms on the site; they are also invented to support and perpetuate desirable behaviors that emerge unbidden.

The Business Model

At this point, we’ve seen the diversity of tools and strategies implemented by Newsvine aimed at building a user base into a self-policing community, manageable by a small staff, that consistently delivers palatable, and at its best high-quality, content. We’ve come to understand that the system has never achieved perfect results, but at the same time has delivered some impressive outcomes. The site has broken national news. Enough users have become exemplars and teachers of the site’s norms to warrant a program that recognizes their efforts. According to

its founders, Newsvine has developed a reputation for being one of the most difficult sites on the Web to programmatically abuse. And by the Fall of 2010, one full-time moderator and one part time staffer were managing a user base of upwards of a million registrants. Newsvine.com is in many ways a remarkable achievement of heterogeneous engineering. Chief technical officer Mark Budos, in an interview, recalled that:

One of Mike's biggest fears from the start was he didn't want to wake up in the morning and come in and see a bunch of spam links on the site. And that, to this day, has never happened. It's actually one of my favorite things, is that you can go home, go to bed, get up the next morning, and bring the site up. And no one's been doing anything for eight hours. And the site has got fresh news from the morning. It's amazing to me. It just runs itself. It's really cool.

As we've seen "runs itself" is an exaggeration—Adams notes that "things tend to go really badly when there's no moderation presence"—but at the same time it's true enough that moderators can, for instance, take vacations, and the site has in the past survived for extended periods with little or no moderation.

Finally, and perhaps more importantly to a startup, it was true enough in the period after the site's founding that the company could sell ads against its content and enter into deals with traditional news corporations. While noble ends in themselves, ultimately the point of keeping the site free of malicious activity and surfacing high-quality content was to turn a profit and pay back investors. In addition to ad sales, after its founding Newsvine sought partnerships with mainstream news providers. The most notable of these came in December of 2006 when the *New York Times*' website, NYTimes.com added the first-ever content sharing tools to its site and

selected Newsvine as one of three social networks for which to provide “share” buttons.⁵⁹ The others were Digg and Facebook. Of the three, two—Newsvine and Digg—were approached by the Times. Digg was already a major driver of traffic at the time. Facebook approached the Times for inclusion after it added its news feed feature. At the time, Davidson told the Seattle Post-Intelligencer that Newsvine was “the up-and-comer” of the group (Cook, 2006); it was a far smaller Website than either Digg or Facebook, but it was growing quickly and according to Davidson, the Times editors appreciated the level of discussion that took place on the site. The New York Times itself had no discussion threads on its stories at the time, and sending users to Newsvine was effectively a method of outsourcing the community features of its site.⁶⁰ The press at the time described the partnership between the paper and Newsvine as strictly a technology deal (Cook, 2006)—no revenue sharing was involved—but (a) exposure from the Times Website promised to give Newsvine a great deal of exposure, driving traffic and ad revenue its way; and (b) Newsvine hoped that the deal would potentially lead to additional partnerships with the Times, and perhaps other sites as well, that could prove lucrative in similar or additional ways.

Newsvine built a share button for inclusion on the Times’ Website, but its work on the arrangement did not stop there. Under the existing design of the Newsvine site, new users—precisely the commodity Newsvine hoped to gain from its deal with the Times—would enter the site as untrusted users and be relegated to the Greenhouse, as would their newly seeded New

⁵⁹ Today sites across the Web have numerous content-sharing buttons. At the time, however, such buttons were far less common, particularly on mainstream media sites.

⁶⁰ The following year, the New York Times would close its bulletin board system, one of the few community features it supported at the time. Many of the users from the forums emigrated *en masse* to Newsvine, creating a large group on the site self-titled the “NYTimes Forums Refugees.” This virtual diaspora and the ensuing culture clash on Newsvine is worth a paper in itself, however it is of limited relevance to the present discussion.

York Times content. That would have two effects. First, it would limit the exposure of NYTimes.com content in ways unlikely to be attractive to the paper. Second, unlike the early adopters who made up the bulk of Newsvine's user base at the time, many users coming from NYTimes.com would simply be looking for a place to discuss the story they'd shared and—dropping in as they did from “outer space”—were less likely to understand the restrictions placed on them as new registrants to the site. So Newsvine added an exception—still in place today—to its algorithm. Users whose first act on Newsvine was to seed a New York Times story skipped the Greenhouse entirely, which in turn made their content immediately eligible for inclusion on the front page and section fronts across the site.

We can thus see how the creation and socialization of the Newsvine user base, including the heterogeneous engineering work done by the Greenhouse itself—enabled Newsvine to draw in a major partner, and also how the resulting agreement reciprocally impacted the design of Newsvine and its Greenhouse. The modification made to the Greenhouse on account of the New York Times deal threads a needle between the interests of the existing Newsvine community, the traffic and community needs of the New York Times and its audience, and the financial interests of Newsvine itself. Moreover, the technological solution that grew out of the lashing together of these resources would subsequently have a major impact on the next phase of the company's existence, and on the company that was about to acquire it: MSNBC.com.

Newsvine Becomes an MSNBC.com Property

In 2007, Newsvine began work on its first major site upgrade. The aim of the updates to the site's codebase—an architectural revision the team dubbed “the M2 framework”—was to

make Newsvine customizable by users. At the time, other social networks like MySpace were allowing users to alter their profiles using “modules” or “widgets”—customizable displays of personally relevant information that could be added to, removed from, swapped out, and rearranged on profile pages by users themselves. Similarly, several services along the lines of Netvibes and Pageflakes had begun to spring up, offering users the opportunity to create a personalized dashboard-style homepage by mixing, matching, and even creating widgets that displayed personalized headlines, weather, email, calendars, and more. At the time, the ability to customize a profile or a homepage seemed to the Newsvine team to be a growing trend worth capitalizing on, and one they hoped would help to increase the popularity of the site. The M2 framework, as envisioned by the startup, would allow users to customize their Newsvine cover. Rather than relying on the standard layout, users could instead replace the various sections of the front page with their own choice of headline modules—feeds of news from various sections or groups on the site, particular news sources, regional headlines, local weather, and so forth. They would also be able to customize their own Newsvine profile pages in a similar fashion, choosing what information to show off to visitors. Not only would the content of pages be customizable by viners, but so would the layout—the M2 framework would allow users to drag and drop the various modules, arranging them in any order they saw fit.⁶¹

The M2 update began with an initiative the developers called the “Tax Man Project,” nicknamed for its intended release date of the April 15 tax deadline (it ultimately launched April

⁶¹ The designation “M2” comes from a new table that was added to Newsvine’s database to facilitate this upgrade. The widgets users added to their pages were to be called “modules,” but a “modules” table already existed in the Newsvine database. So the new table was instead called “M2” as shorthand for “modules 2.” The “M2” moniker ultimately came to refer to the entire update of the site architecture that was developed in tandem with the new modules. Ultimately, through common use the term ceased to refer to the database at all and became instead a numbering system for major updates to the site’s architectural framework. At the time of my fieldwork the site was being readied for a transition to the M3 framework, and the original codebase had been given the retronym M1.

24, 2007). The Tax Man Project, known to users as “Newsvine 2.0” culminated in a widgetized redesign of the front page that looked more or less like the one that is still in use today (Figure 3.3). The developers started writing a variety of modules, and even briefly considered the idea of allowing users to write modules themselves. Work also began on the M2 profile pages, which ultimately became available to users upon request as a beta feature (Figure 3.4), but as of this writing have never been rolled out across the entire site. Newsvine, as it turned out, was about to be acquired by one of the largest news sites in the country—MSNBC.com. As Lance Anderson, Newsvine’s director of front end development, described it,

We put so much work into modules for that page. We had a little module directory where you could add modules [Figure 3.5]. And before even imagining other people creating widgets, I thought we’d have more resources and more time where we could create more cool widgets to put on there for our users. ... Like, Josh has got this cool algorithm that, based on your viewing on Newsvine, we can recommend stories to you. And just different widgets like that that we could have put on the front page and we just never did. And I think there’s a host of reasons for that. One of the big ones is that a month after we launched that front page, MSNBC contacted us and we went into negotiations with them. And then that kind of changed our whole course. And then [also before MSNBC] money became an issue. We were running out of money. And I think we kind of realized that creating a dozen cool widgets on our front page wasn’t going to quadruple our user base. [laughs] You know? So we were trying to look at things that would help kind of really give us a jump in registrations and user base.

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Put a Seed Newsvine link on your own site. Here's how...

Radiation concerns for Japan's beef supply



1 hour ago - By Tomoko A. Hosaka, Associated Press

Concerns about radiation-tainted beef intensified Sunday in Japan as officials struggled to determine the scope of the problem and prevent further contamination of the meat supply.

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Newsvine Columnists

Poll: Is it ever OK to physically admonish your child?

Soph0571

I felt bad for the Orange Country Sheriff's as Casey was released

The News In Pictures

< Previous

Next >

1 of 26

An unidentified man kisses the hand of US Secretary of State Hillary

Figure 3.3 // The Newsvine Homepage

Note the icons in the corner of each frame. These are modules that can be swapped out by users for custom content.

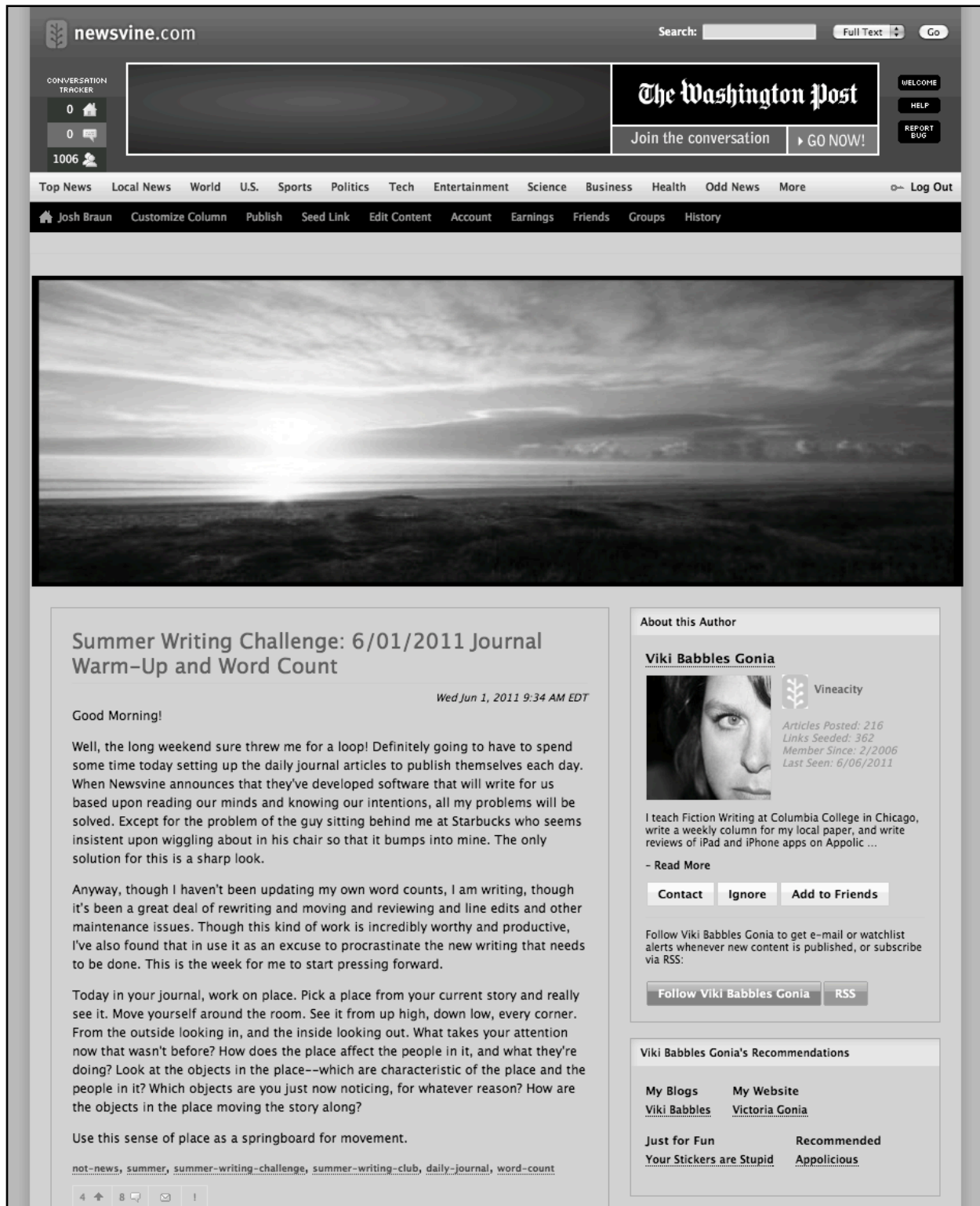


Figure 3.4 // M2 Customizable Profile Page

The above user has beta access to the M2 profile; she was also hired as a part time moderator.

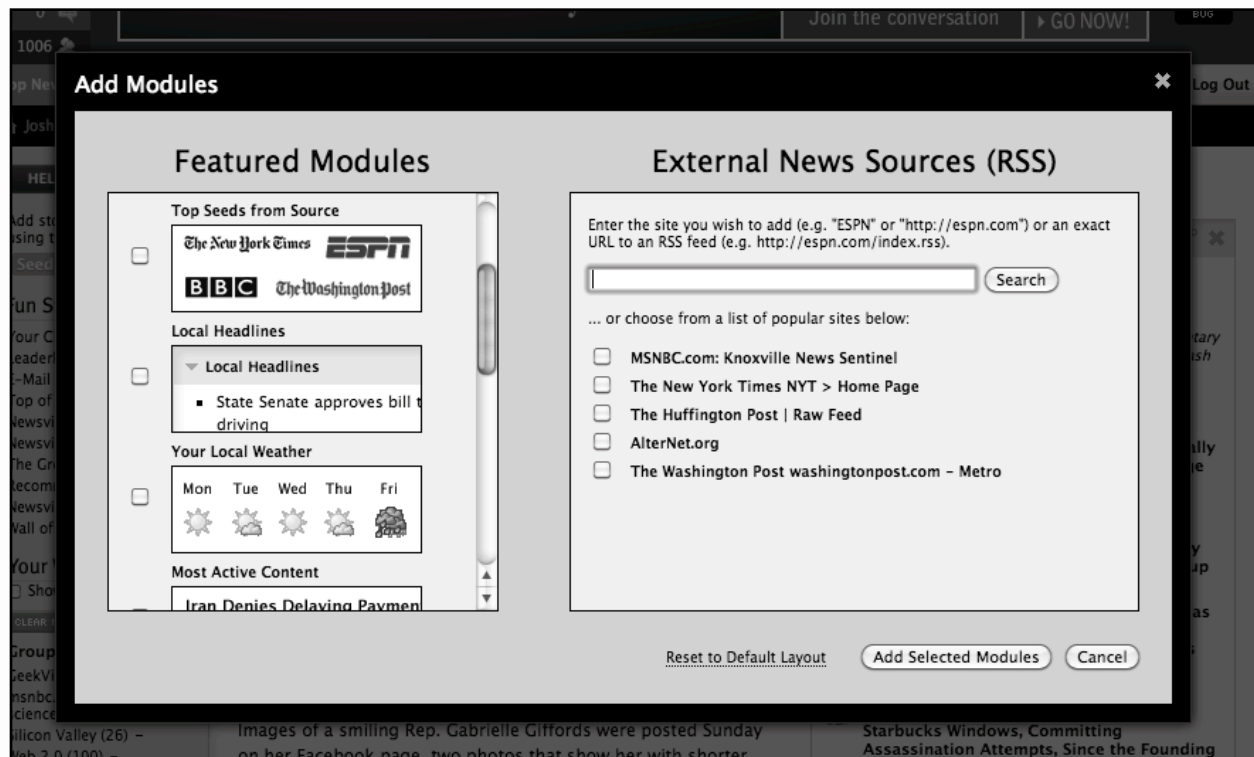


Figure 3.5 // Newsvine Module Directory

Acquisition by MSNBC.com, then, became a solution for Newsvine as a system builder. It provided an answer to the startup's flagging finances and gave them a way to pay off investors without engaging in another round of financing. It was a deal that allowed a startup that, by its founders' own admission was low on reserves into what an industry observer deemed "one of [VC firm] Second Avenue's most successful investments." The acquisition should not be seen as an act of desperation, however. The startup had talked with corporate suitors in the past (Newsvine, 2007a), but came to the conclusion that MSNBC.com would offer several unique advantages.

First, as one of the top three news sites in the United States, MSNBC.com had a remarkable base of 29 million monthly users, which promised to funnel enormous amounts of traffic to Newsvine (Johnson, 2007; Newsvine, 2007a). In addition, MSNBC.com had the potential to offer Newsvine substantial infrastructure improvements to help handle all the additional traffic—it operated a world-class data center, which would give the social news site "vastly more server power and reliability, which Davidson said...had been the site's most significant challenge" (Johnson, 2007). And MSNBC.com was headquartered nearby in the Seattle suburbs, which meant there would be no need for Newsvine to relocate or for the staff to fly cross-country on a regular basis. The new corporate parent would also provide an additional source of professional news content to the site beyond the existing Associated Press wire subscription, and its financial resources would allow Newsvine to grow its own development staff (Newsvine, 2007a). Additionally, MSNBC.com would allow Newsvine to continue operating independently as its own brand. As Newsvine put it in the acquisition announcement on their blog,

As desired by both companies from the outset, Newsvine will continue operating independently, just as it has been since launching in March of 2006. Msnbc.com is committed to maintaining and growing the community and features that have made Newsvine what it is today. In other words, Newsvine will be the same Newsvine you've always known, only stronger. Over the next few years, Newsvine technology and content will make its way onto msnbc.com, and vice-versa where it makes sense. Our users' columns and content will remain as they have been, as we work hard with msnbc.com to implement improvements and enhancements. (Newsvine, 2007a)

Out of a sense of fairness—and to grow its user base—Newsvine had always promised members revenue sharing on advertising, and while this spreading of the wealth didn't extend to ownership of the company, it framed user contributions as valuable commodities. A few users, as a result, developed a sense of financial entitlement toward the site, and when Newsvine was bought out for a large, if undisclosed (Johnson, 2007), sum on the basis of their content, some inevitably took umbrage with the deal.⁶² To minimize this sort of reaction, the acquisition was a subject that had to be carefully framed by the founders. Amid the announcement, they were sincerely effusive in their thanks to the community. On his own blog, COO Calvin Tang wrote:

I personally would like to thank all Newsvine users who have helped make Newsvine what it is—the most vibrant and active community of users on the digital news media landscape. In addition to being one of the most powerful and unique publishing platforms

⁶² As an example, here was one upset user's reaction to the announcement on the Newsvine blog:

You know, Mike, my WHOLE thing all along is the idea of “baiting” people with the promise of a pay-off for their work while you and yours were the ones really cashing in. I used the phrase “bait and switch” and I have been proven true. If you had just dropped the pay for seeding thing like I suggested from the outset, I and others wouldn't be pissed off at your “success”. Your tactics smack of ethical failure. You promised community and then cashed in!

on the web—the open dialogues, the free and creative expression of ideas and the genuine manner in which all of you participate on the site are some of the foremost reasons that msnbc.com found Newsvine to be an attractive company to partner with.

(Tang, 2007a)

Mike Davidson expressed similar sentiments in his comments on the Newsvine blog (Newsvine, 2007a), and the post itself was careful to emphasize the benefits of the deal for the Newsvine community. Among them was:

Increased exposure for Newsvine writers. Remember when Killfile broke the news of the Virginia Tech shooting 22 minutes before the Associated Press? What about when Corey Spring got an exclusive interview with Dave Chappelle? When important moments like these occur on Newsvine, why shouldn't they also be put in front of 29 million people on msnbc.com? What about when a Newsviner builds up an audience for a weekly entertainment column like Steve Watts' Lost in the Vines? Why shouldn't great content like that be put on an even bigger stage? We think it should, and although Newsvine and msnbc.com will remain independent brands, we're going to spend the next several months figuring out ways to get the best content in front of the biggest audiences possible. (Newsvine, 2007a)

This promise of increased traffic and potential placement on MSNBC.com was reiterated by Mike Davidson in the comment threads. The announcement and the ensuing comment thread, in which the Newsvine founders carefully responded to the questions, concerns, and criticisms of users, represent acts of heterogeneous engineering, as the startup went about the process of getting its essential and carefully constructed—but also recalcitrant—user base on board with the

company's plans for expansion and financial stability. The notion of giving users a bigger microphone via MSNBC.com was obviously intended to help sell the idea of the acquisition to the Newsvine community, but it was not a disingenuous promise. For example, several prominent users received press passes to the 2008 national party conventions to report for Newsvine on behalf of MSNBC.com. And two of Newsvine.com's prominent members, Viki Gonia and Chris Thomas, were put on the air shortly after the acquisition at MSNBC TV to describe their, and the community's, reaction to events at the Democratic National Convention (Newsvine, 2007b; Tang, 2007b).

We can see, then, how Newsvine's acquisition placed it at the center of revenue sharing and crowdsourcing labor debates that persist to this day, with sites like Huffington Post, which was criticized for not paying writers at all and subsequently cashing in on their efforts through its sale to AOL. Sharing ad revenue, while it helped Newsvine avoid the negative connotations of crowdsourcing as a form of unpaid labor (Terranova, 2000) or digital serfdom (Friedl, 2006), proved a recalcitrant resource in the new context of acquisition, and did not entirely exempt the company from criticism by its users. As we'll see, this was only one of the carefully refined aspects of Newsvine's system that would prove recalcitrant under the new context of MSNBC.com ownership.

MSNBC.com as Heterogeneous Engineer

So far we've looked at MSNBC.com as an actor in the system that Newsvine was constructing. As an initial exercise in vantage point switching, it's useful to briefly consider what MSNBC.com was hoping to do with Newsvine. When the dot-com crash hit in 2000, MSNBC (at that time all one company) "shelved ambitious plans to go public and acquire

complementary properties” (Johnson, 2007), but after MSNBC.com became independent of the MSNBC television property, it gradually returned to the idea of growing its offerings through acquisitions. Newsvine was to become the joint venture’s first acquisition in its 11-year history, and one of the first acquisitions by any mainstream media company of a social news site (Arrington, 2007; Stelter, 2007). Since its launch in 1996, MSNBC.com had become a traffic juggernaut, but, according to the site’s own report on the merger, “While msnbc.com has long ranked among the three most popular news sites on the Web, it has been late to the game in expanding its offerings in user participation and non-professional reporting” (Johnson, 2007). For instance, MSNBC.com had limited comment functionality at the time; by contrast one of the company’s leading competitors, AOL allowed comments on every story, and another, CNN.com, was heavily touting its iReport citizen journalism initiative (Stelter, 2007). Social networking functionality on Websites was also becoming a major trend. At the time, MSNBC.com president Tillinghast told reporters that Newsvine offered “a lot of interesting features” that the parent company could “evaluate and port to msnbc ... rather than us creating a feature they already have” (Johnson, 2007; lowercase original). In an interview last year, he recalled that

Social networking was really kind of hitting its stride at that time. And we felt like we needed a position in that space. It was a question of buy versus build. We didn’t have anybody who was an expert on social networking who worked for us. So “buy” meant hire, then build, as opposed to just buy. In buying Newsvine we picked up technology that we were able to integrate throughout all of our sites for commenting, blogs, ratings—and we also picked up the people, who could help us to think through how to integrate social networking into our products.

Similarly, at the time of the acquisition, one the MSNBC.com executives involved in the deal wrote, on his personal Website that

You can read elsewhere about the details of the deal, but the gist is this: we plan to leave Newsvine alone—learn from it, integrate little pieces of it, watch it grow. The site will continue to run independently with Mike at the helm; meanwhile, we will incrementally find sensible ways to integrate the “social thinking” of Newsvine into the “big media thinking” of MSNBC.com. (Sorgatz, 2007)

MSNBC.com also appreciated the fact that Newsvine was a small organization at the time of its acquisition, as well as a local one. In the parent company’s own news story on the acquisition, Tillinghast was quoted as saying:

“Newsvine is local, small, nimble—they don’t come with a lot of things you don’t want,” [Tillinghast] said, such as complicated partnerships and contracts. “There isn’t a lot to rearrange.”

At this point, we’ve begun to see what the acquisition of Newsvine accomplished for the heterogeneous engineers at MSNBC.com. With its purchase, MSNBC.com was attempting to play catch-up with its competition in terms of social engagement with readers, as well as the technology behind such engagement. It had acquired a group of experienced developers with a mature social networking platform, and without taking on the same amount of organizational inertia and baggage that would have come from the purchase of a larger firm. Several sources also noted that Newsvine offered not just the technology and space to facilitate community, but a particularly valuable existing user base:

What is MSNBC getting, other than a slick and feature-packed website? Newsvine is also a thriving Citizen Journalism community, with solid stats. In our July review of Newsvine, we noted that Newsvine gets about 1.2 million unique visitors per month and it has grown at an average rate of 46% per quarter. Newsvine community members view an average of 21 pages per day and spend an average of 143 minutes per month on the site. The site gets about 80,000 comments a month and 250,000 votes a month.

(MacManus, 2007)

This demographic of highly engaged users was potentially a highly lucrative one, which MSNBC.com wanted to capture. But it was also one which, at the time, MSNBC.com had relatively little to offer. Newsvine was, in many senses, intended to be a solution to this predicament. Mike Davidson described the demographic, dubbed “news explorers,” that MSNBC.com pursued with its acquisition:

News explorers are the very high-involvement people who have an above-average interest in news, who are very likely to forward stories to friends, who are very likely to comment on stories themselves, who aren’t satisfied reading a quick, three-paragraph AP blurb about a topic. There are plenty of people out there who only care about reading a three- or four-paragraph AP blurb about a topic. In fact, I would say that number is well over 50 percent of all news consumers. But if you take the rest of those people [the news explorers], they are the ones that generate a ton of page views and spend a lot of time on your site; an inordinate amount of time on your site. We think of ourselves as the site within the company [MSNBC.com] that is specifically geared to deal with those sorts of people and to make the most out of them.

A Post-Acquisition Newsvine

Looked at from the vantage points of their respective builders, neither Newsvine nor MSNBC.com was a completely stable system in the time leading up to the acquisition. Newsvine needed a buyer to help it stabilize its finances, while MSNBC.com needed some form of community offering in order to capture a highly engaged and potentially lucrative subset of the news market that its competitors were beginning to pursue aggressively. However, many achievements had been made by way of the heterogeneous engineering that the companies had done to that point. Newsvine had developed a productive, pro-social, and rapidly growing user base of news explorers and citizen journalists. MSNBC.com was dominating the more traditional news market online. In other words, large pieces, if not the whole, of each system had been stabilized from the vantage point of the respective builders prior to the acquisition.

But as we've seen the appearance of stability is in fact maintained through isometric pressure. Returning to the vantage point of Newsvine, we have come to understand how much continual effort went into maintaining this user base, and how many different recalcitrant actors—technological, financial, policy-oriented, and social—had to be lashed together and constantly maintained to attain this “stability.” In taking on MSNBC.com as a corporate parent, Newsvine lashed another recalcitrant actor into its evolving system and the stable pieces of the Newsvine system would soon become dynamic under the new balance of pressures. As Domingo (2008) and others (Hemmingway, 2005; Schmitz Weiss & Domingo, 2010) have pointed out, adding an actor to a system in this way will result in a shift in the relationships in the existing network, between components of the system—in our terms, it will necessitate further heterogeneous engineering to restabilize. In what follows, I will look at how the addition of MSNBC.com as a

corporate parent impacted Newsvine and the user community it had so carefully and relentlessly engineered. We've discussed the advantages that Newsvine hoped MSNBC.com would provide as an actor in its system. But as we've learned, all actors within a system are recalcitrant—they solve some problems and create others. What advantages did MSNBC.com ultimately provide and what changes were necessitated to cope with its recalcitrance? Later on we'll explore how Newsvine's acquisition and development impacted groups within MSNBC.com, but for now it's important to remain in the present vantage point in order to understand what happened next.

The Solution Stack: The Only Unix Guy at MSNBC

Newsvine, as a frugal startup, built its entire system on a solution stack that was predominantly free and open source. In selling to MSNBC.com, it hoped to take advantage of the latter company's tremendous resources for handling heavy Web traffic. However MSNBC.com and its data center were built on a proprietary Microsoft solution stack. As Josh Yockey explained,

We built up a large codebase in PHP, and some Apache. ... And then early on when we got acquired the big question was, "Do we want to migrate all of our functionality to what they [MSNBC.com] did?" Which is C# [a Microsoft-developed programming language] running through IIS [Microsoft's proprietary server software]. And we decided the amount of time it would take to do all that, you know, could be better spent on making new features. And so we stayed on Linux-Apache the whole time. Which has been sort of an issue, because they don't have operational personnel that know anything about it. So we ended up retaining a much, much larger amount of operational responsibility than we wanted to. You know, when we were a startup, we understood, if

the database server has a bad drive or something it's our job as engineers to go out and drive out and fix it, because there's nobody else there. But our hope when we got acquired was, "Oh, finally, you know, I don't have to get woken up at one in the morning because there's a RAID failure or something."⁶³ But in fact, you know, three years later we still get woken up at one in the morning because there's a RAID failure. Because the operational team over there just doesn't have the expertise.

To fill this breach, Newsvine eventually made a new hire—enrolled a new actor in its system—an experienced Linux systems administrator named Eric Flamoe, whose job it is to keep the hardware and low-level systems at Newsvine running smoothly, as well as to gradually educate the tech support team for MSNBC.com, Microsoft Operations Support (MOS), on how to handle common problems with Linux servers. As a self-described "liaison" between the Windows experts at Microsoft and the Linux-based world of Newsvine, Flamoe also learned a great deal about the way MSNBC.com's data center works.

Hell, I'm the only Unix guy there in that whole of MSNBC.⁶⁴ So, you know, it can I guess be kind of lonely at times. A lot of the ways I know how to solve things are just not how it's done there. I don't point that out as something that's a negative, per se. It is a challenge that has, for my part, been nice to address, partly because I really know almost no Microsoft or Windows systems administration. So it certainly is a challenge, as there is a challenge [for them] of understanding how Unix works here. I mean, I couldn't help but kind of take the bait [when it came to the opportunity to work at Newsvine], not only

⁶³ RAID stands for "Redundant Array of Independent Disks." It is a hardware configuration intended to make data storage and provision more reliable. When a RAID system fails data becomes inaccessible; a RAID failure in this context makes a Website inaccessible.

⁶⁴ For less technical readers, the Linux operating system is a variant of Unix.

to see how it [open source] would fit in, but, you know, take the deep end of the swimming pool and Windows, you know, how do you do Windows at the enterprise level?

We can see, here, the sense in which Newsvine found MSNBC.com to be a recalcitrant actor—it has not, in the end, provided a simple plug-and-play solution to the startup’s need for a scalable hosting solution. But hiring a dedicated Linux systems admin, who would double as a Microsoft liaison, was only one of the potential solutions imaginable for dealing with this issue. After all, from the vantage point of MSNBC.com and the system *it* was trying to build, Newsvine and its alternative solution stack would appear as the recalcitrant actor. We can also imagine a world in which Newsvine solved its problem by rewriting its software to run on MSNBC.com’s solution stack. To fully appreciate how Flamoe’s hire threads a needle between all the interests involved, we have to understand why this alternative solution wasn’t adopted. “On the technical side,” says Josh Yockey,

I would say we’ve repeatedly been asked, you know, “Why don’t we just run our stuff on C#, on .NET? And that would make everything interact much better because that’s how everything runs at MSNBC.” And that’s certainly possible. I wouldn’t say we’re totally inflexible on it, but, you know, obviously anyone who requests that is dramatically underestimating the amount of work it would take. ... We might replace PHP with something. ... [But] the OS and sort of the core platform is pretty set with what it is. Other than that, we can pretty much do anything.

The development team at Newsvine prioritizes speed to market and prides itself on the ability to respond flexibly to requests. Rewriting at least parts of their software, then, has never

been out of the question, but doing so with a small development team—remember, Newsvine has less than ten employees—quickly puts a strain on resources. On the one hand, all of the developers felt that being part of a small group was actually advantageous in many ways—every founding member of the team was intimately familiar with the software’s architecture, and the ability to fit the entire development staff into a small shared office suite eliminated much of the bureaucracy and the “meeting culture” that many saw as being lethal to productivity.

Newsvine’s CTO, Mark Budos explained,

I’ve been doing this a long time and a dev team that’s any bigger than five or six will fail. And I’ve seen it time and time again. You have to have small groups of five people. Or, if you’re going to have a bigger product, then you have to have [small] teams responsible for different components of a product. And then you can put them together to build bigger and bigger things. But you can’t have, like 10, 15, 20 people working on one thing. Your productivity just dies. So, from that perspective yes, we’re able to build a lot and we’re able to build it really quickly.

At the same time, as we’ll see, upon its acquisition Newsvine became responsible for a great number of additional tasks, meaning that small and flexible or not, the development team was spread very thin.

Originally, Newsvine had hoped that in taking on a corporate parent, it would acquire the necessary resources to substantively expand its staff, both to accelerate development on Newsvine.com itself, and to assist in development tasks for the parent company. Again, however, it encountered recalcitrance, incurred not just from MSNBC.com, but from the nation’s financial meltdown in 2008. Davidson explained:

Right after we got purchased, that was when the economy kind of hit the skids. There were hiring freezes all over the media industry, and teams weren't generally getting bigger; they were getting smaller. Instead of going from six people to twenty people, like maybe we had expected, we went from six people to eight people.

At this point we're able to see how the decision to hire a Linux system administrator threaded a needle between a variety of pressures and interests. It is simultaneously a response to the pressure levied by the economy—instead of 15 new staff members, the enrollment of MSNBC.com only allowed the hire of a handful of new employees—as well as by the proprietary systems at Microsoft and MSNBC.com. Because of these limitations, it was impossible to hire the number of new developers necessary to help shoulder the intense work required to rewrite Newsvine for a Microsoft solution stack. The recruitment, instead, of a single Linux sysadmin took pressure off the developers to fix hardware problems, and allowed them to focus on new features and responsibilities, despite not migrating to MSNBC.com's data center. Flamoe's efforts at liaising between Newsvine and MOS permitted also alleviated some of the absence of tech support for Newsvine.com's largely open source solution stack. We can also see the heterogeneous aspect of the concerns addressed here, which are simultaneously technical, financial, and policy-oriented (MOS develops standard policies and procedures for dealing with problems on Microsoft Websites).

The User Base: That's not really acceptable behavior on Newsvine

For legacy news organizations, embracing the idea of “the public” is one thing; dealing with an unruly torrent of user-generated content often proves to be quite another. In 2007, for instance, CBSNews.com ultimately made a decision to temporarily shut down comment threads

on all stories related to then-Senator and Presidential candidate Barack Obama. Mike Sims, the director of news and operations for CBSNews.com told the press that the site could not immediately find a way to deal with the “persistence and volume” of racist comments the stories were attracting. While some appreciated the move, it also led to criticism of the site, with some commentators claiming that not allowing readers to see and react to racist comments effectively hid the important issue of racism in the campaign (Seelye, 2007).

The fact that a major network would invest so heavily in designing interactive features into its site, only to shut them down drives home the profound challenge that comment moderation can pose. This is particularly true for legacy media sites whose 20th century brand images carry deeply embedded cultural currency, as compared to their social media counterparts. MSNBC.com Web producer Will Femia noted that a news site and the discussions it hosts will inevitably be “assigned a character by individuals who are on whatever crusade they may be on.” The news organization becomes a symbol—or rather a whole set of symbols with cultural currency—to which different individuals and groups impute different meanings:

NBC News means different things to different people, but it means something. And MSNBC means something. And Microsoft means something. And even within that, our sub-communities mean things beyond what we can control. Like it just doesn't matter [what you do]. You're going to get a Fox News guy in there somewhere. Or you're gonna get an anti-corporate guy in there. You know what I mean? To some extent there's nothing you can do.

These challenges extend to all the networks. ABCNews.com, for instance, has found it necessary to retain a team of moderators whose sole job is to review every comment posted to the site. Until May 2010, MSNBC.com pre-moderated all of its blog comments, reviewing each and every one *before* it went on the site. This is not unlike the evidence gathered by Hermida and Thurman (2008) during the same period, who noted that after some initial experimentation with unmoderated comment spaces, UK news websites were overwhelmingly shifting to pre-moderating their user comments, despite finding the task to be incredibly resource-intensive. The worry among legacy news providers has generally been that unsavory comments by users might tarnish the civil and/or objective brand image of the news provider. As Michelle Levi, a Web producer at CBSNews.com in 2009, when I conducted the initial pilot study for this dissertation, put it,

There's a quote [placed between a blog entry and the ensuing user comments] saying "CBS News content stops here. We're not responsible for these things." You are giving a little bit of a playground for people to say what they want. But it's still on a Webpage that has the name "CBS News" on top of it. And no matter what, it will be associated with that news division.

Even when well-moderated, user comments don't always constitute a conversation or a discourse—civil or otherwise. And poor moderation on a news site potentially exposes the organization to legal liability. In some cases libel laws apply, and there are other risks as well—if a commenter exposes an anonymous source, for instance. Moreover, it's recently been noted that vicious comments on stories can in fact scare away journalists' hard-won sources (Davenport, 2010).

At many news organizations, and especially the national television news divisions, throughout the 2000s, this has led to what Hermida and Thurman (2008) have referred to as a strong gatekeeping approach when managing the inclusion of user comments on legacy media Websites, meaning that journalists in these cases have tended to view themselves as arbiters of what content is fit for public consumption.

While Newsvine.com was a social network built to allow users to monitor and moderate one another's contributions, the "gatekeeping approach" was in favor for quite some time at MSNBC.com, and this according to the Newsvine staff—as well as to a number of editors and producers I talked with at the parent company—led to a fair amount of resistance to the inclusion of Newsvine's style of community comment moderation on the primary MSNBC.com domain. At the time of the acquisition, MSNBC.com described itself as "racing to foster a community among its readers and to exploit the power of unmoderated user commentary and ranking of the news" (Johnson, 2007). At the same time, though, it was not racing to have these things appearing on its own flagship domain. Tillinghast during that period described the flagship site's position on the inclusion of Newsvine features as "evaluate and port" (Johnson, 2007), meaning that the site would make decisions carefully over time as to which Newsvine features would work for MSNBC.com. Initially, as opposed to adding Newsvine comment threads to all its stories, MSNBC.com added a link titled "Discuss on Newsvine," which when clicked, would send users away from MSNBC.com to a version of the story appearing on Newsvine.com. This approach was what Mike Davidson described as MSNBC.com's "arm's-length community concept."

We [at Newsvine] just don't really do any filtering at all. And so, the reason why it's nice to have kind of a slight brand separation between the two [sites] is that we can open up comment threads on Newsvine for MSNBC stories, and because they're branded Newsvine, it's not as important as it would otherwise be to tightly control what shows up. As you know, from reading user comments on really any site that allows them, sometimes comments are awful, and those ones come down. But other times there are comments that are not worth deleting, but not really the sorts of things that you would want to show up on your flagship site, necessarily.

In other words, the moment when a user clicked "discuss" on an MSNBC.com story or jumped to Chuck Todd's space on Newsvine, they were dumped—somewhat jarringly—into an entirely different site, with vastly different branding, layout, and user interfaces. The setup took the small disclaimer mentioned by Michelle Levi, "our content stops here" and blew it up into a sort of virtual border crossing. Users were allowed greater freedom on Newsvine, but at the expense, perhaps, of their direct involvement with the network, which shuffled them off of its flagship domain entirely.

Initially, it didn't appear as though this level of integration would be all that challenging. Newsvine had already developed an integrated button for seeding content during its partnership with the New York Times Website. All that had to be done was to put the same button on MSNBC.com, and change the wording from "Seed to Newsvine" to "Discuss on Newsvine." Without realizing it, the first reader to click the link would actually be clipping the article to Newsvine, in much the same way they would share it to another social news site like Digg or

Reddit. The primary difference was in how the action was framed for the user.⁶⁵ When the “Discuss on Newsvine” link was clicked, the user would arrive at the article on Newsvine.com, with a comment thread below, not necessarily realizing that they themselves had been the one to initiate its placement there. Unregistered users would, of course, be asked to create a Newsvine account during this process. When subsequent users clicked the “Discuss on Newsvine” link, Newsvine’s software would—as it would for any other article—identify that the link had already been seeded to the site and simply take the user to the existing Newsvine post and its comment thread. A fringe benefit of this, for MSNBC.com, was that stories no one felt like commenting on would not turn up on Newsvine, so all MSNBC.com content there would appear discussion-worthy.

Here we can see how Newsvine was able to marshall its existing code for a new purpose. The move was an efficient use of the company’s limited resources, and it worked extremely well from a technical standpoint. But as we’ve already seen time and again, problems are never exclusively technical, and the “Discuss on Newsvine” button would prove recalcitrant. Several things happened as a result of its implementation that would require additional heterogeneous engineering. First, with tens of millions of monthly visitors to MSNBC.com, Newsvine opened itself up to a firehose of MSNBC.com seeds, which at times overwhelmed the site’s front page. Lance Anderson recalls,

We were getting so much traffic from MSNBC stories that our front page was becoming dominated by MSNBC content. And it was right after the acquisition. So, of course, a lot of our community users were, like, “Argh! They’re being taken over by MSNBC!”

⁶⁵ One other difference was that Newsvine was able to include the full text of MSNBC.com articles as seeds, rather than just links to them, as is the case for seeded articles from unaffiliated media outlets.

And it's like, "No, really we just need to write some code to clean it up. It's not this big conspiracy," you know? Everybody wants to jump to the conspiracy, but it wasn't. No, we just wrote some code. Now I think we have it all funneled down to one little module on the front page. So all the other modules on the front page, they're not allowed to have MSNBC-sourced content. Only the module over here is. So it's all in there, it's self-contained. So that was kind of the first set of things we did.

The additional code thus threaded a needle between the concerns of Newsvine's user base (and the potential impact on its citizen media brand image) stemming from the flood of MSNBC.com seeds on the one hand, and the desire of its new corporate parent for access to the site's community on the other. But even with the technical fix that relegated MSNBC.com content to its own box on the front page, Newsvine also began receiving lots and lots of new users, who were not "friends of mine and friends of theirs." Many of them had never heard of Newsvine or the Code of Honor. And as you might expect, in a site that relied so heavily on a carefully engineered and largely self-policing user base, this began to have repercussions. The Newsvine Blog entry from this time in early 2008 reads:

The newest thing we've launched—just last week—is a new "Discuss This on Newsvine" button which now appears on all msnbc.com stories. To be honest, we didn't expect more than a few clicks a day on these buttons as generally "Seed Newsvine", "Digg This", and every other social networking button you see on the web have very low clickthrough rates, but so far we're getting a lot more than that. The result has been a few msnbc.com stories a day receiving hundreds of comments apiece. This is a good thing, of course, because it proves out the theory that plenty of msnbc.com users are interesting in

discussing stories, but it's potentially a bad thing because as we all know, when new users come en masse to a Newsvine thread, they aren't always aware of how we do things around here. We were all new at one time. Please welcome in our new visitors as you would a new guest to your own cocktail party, with diplomacy and patience. We hope that the Newsvine community puts its best foot forward when receiving new participants into the collective discussion.

The post listed off several of Newsvine's initial technical responses to this problem, including adding a "Greenhouse" designation to new users' comments, to flag for the existing community which users should be given helpful advice and/or a wide berth. In light of the instant popularity on the site of NBC News personalities, Newsvine also coded an exception to prevent any user with a token that indicated s/he worked for Newsvine, NBC News, MSNBC or MSNBC.com, from appearing on the site's "Leaderboard," a page displaying the stats of Newsvine's most popular users. But the post, and particularly the excerpt above, is also interesting in the manner in which it lays out a heterogeneous solution to the problems incurred by the "Discuss" button. Technological fixes were being delivered, yes, but the post is also a entreaty to experienced Newsvine users to help socialize the unwashed masses from MSNBC.com, to make them amenable to the site's system of moderation. And interestingly, a technical fix—the visual Greenhouse designation for comments—was used in combination to identify users in need of social engineering.

But the problems did not end there. MSNBC.com stories continued to be disproportionately popular on Newsvine, owing to the "firehose" of users coming from MSNBC.com. This flow only increased shortly after the acquisition in 2008, as the U.S. entered

into a presidential election cycle—a time when news sites generally do their best traffic, and MSNBC’s political brand becomes especially valuable. These surges of traffic during the election cycle compounded a side effect of using the pre-acquisition story-seeding functionality to provide Newsvine discussion threads for MSNBC.com stories, which was that the first user to click “Discuss” on an MSNBC.com story didn’t just share it to Newsvine—they added it to their own blog column. This resulted in a number of major issues, owing to (a) the fact that Newsvine.com promises users a cut of the ad revenue when they generate a popular column, and (b) the fact that Newsvine users, under the Code of Honor, are responsible for moderating and maintaining civil conversation in their own column. Newsvine’s staff moderator, Tyler Adams, recalled,

We used to have a giant loophole in our system. ... The first person to comment on [a story from] MSNBC.com had the MSNBC.com seed go into their column. So if you arrived on the front page of MSNBC.com at 8:30 in the morning and Sarah Palin had been selected as the Vice Presidential nominee, and you clicked on that, it went into your column. And that could have been you registering for Newsvine for the first time. And then you had a 30,000-comment thread in your column. One, you would be terrified if you were new. And two, you would make a bunch of money. And so there were people who would go around every morning and seed the top ten articles on the site [MSNBC.com], or try to. People would kind of fight over it. And those people made a lot of money off of Newsvine and did no moderation. I mean, even if they had tried to do moderation, they were signing up for reviewing 15,000 comments a day or something like that.

The system, in short, terrified new users unexpectedly and encouraged those who became more familiar with Newsvine's workings to game the system to their own financial advantage. It also took about half a year to fix. With their added post-acquisition responsibilities it wasn't until January 2009 that the developers were able to roll out a workaround, which clipped "Discuss on Newsvine" stories from MSNBC.com to generic columns corresponding to their section headings on MSNBC.com (e.g., "Business," "Entertainment," etc.; Newsvine, 2009).

As we saw earlier, a major aspect of Newsvine's heterogeneity is that many of the components that make it work—that allow for community building and pro-social discussion—are not technological actors at all. Even without MSNBC.com's robust data center, in many ways, Newsvine's servers and software performed admirably through the acquisition and increased MSNBC.com traffic levels. In its first two and a half years of operation, the service only experienced three extended periods of downtime (Newsvine, 2008d). Much of this owed to the development team's experience at Disney. Unlike many successful startups, which experience major technical problems as they grow, Newsvine, from its inception, was built for scale. As Budos put it,

Josh [Yockey] and I are kind of freaks. He worked on Fantasy Football at ESPN, which is extremely popular. ... I worked on an ads system that served a billion ads a day. So we know about scalability and how to manage high volumes of data and high volumes of users in an efficient manner. We kind of architected for scalability from the get-go. Rather, if Newsvine was in many ways an isometrically stable system before MSNBC.com, the pieces that came under the greatest divergent pressure through the acquisition had to do with its cultural components, as opposed to its technical ones. As we've seen, in the original system,

Newsvine's technology depended on Newsvine's user culture to the extent that it made little sense to separate the two—they were both integrated and necessary parts of a heterogeneous phenomenon. But even after MSNBC.com stories had been prevented from overwhelming Newsvine's front page and removed from the columns of individuals, MSNBC.com traffic and registrations continued to make it more difficult to maintain the user culture that made the original Newsvine work. Mike Davidson remarked that,

The people that come over to Newsvine in that way [from MSNBC.com "Discuss" links] are not familiar with the ethos of Newsvine. ... They feel like they are about to leave a comment on a major media site. Sometimes there are bad behaviors that go along with that. If you're reading some sort of article—or watching some sort of video—by a pundit on MSNBC...[and] you want to leave a comment about it, flaming what you just saw, you're not necessarily aware that that's not really acceptable behavior on Newsvine. That's not really what people do. And so, often those threads are the toughest ones to moderate, because you have people who don't know the rules.

There were those in Newsvine's core user base who answered the developer blog's clarion call to help draw MSNBC.com users into the Newsvine community help acquaint them with the site's norms. However, as Davidson noted above, many of the people coming in from the Blue Site were apt to view the Newsvine page they landed on as a normal comment thread on a mainstream news site, responding to—or worse, flaming—the single story and leaving, never to return, opting out of Newsvine's reputation economy and normative structure entirely. Although the growth of online communities frequently leads to escalating "conflict and coordination costs" (Kittur et al., 2007), and challenges to established norms—including flames—can at times

lead to better articulations of a community's existing values (Franco et al., 1995), what was happening at Newsvine was the introduction of a ceaseless, directed flow of users who not only didn't share the community's norms, but mistook it for something else. Josh Yockey noted,

At first the Newsvine users tried to interact with them as if they were part of the Newsvine community. So they'd reply to their comments and teach them about the Code of Honor if they looked like they were violating it or whatever. And I think eventually most of them just stopped. Because they realized these people weren't coming back. They were just coming to leave a comment and then leave and then never come back again. Which is not universally [the case, but] it was true in large part. There were actually quite a few people who came through and they kind of got integrated into the community, which is great. Which is what we wanted. We want to just turn "fire and forget" commenters into members of the community. And many did. But the percentage that did was pretty low. And I think a lot of the Newsvine people just realized that it wasn't worth going into these, you know, ten thousand-long comment threads and thoughtfully replying to each one of them, or whatever—"Excuse me, you should educate yourself on the Code of Honor." They just got out. ... [That was one of the] the major disruptions in the community.

Inventing our Future: Building systems for MSNBC.com

You'll recall that Tillinghast described the acquisition of Newsvine, he mentioned that the company was in part purchasing a "buy or build" corpus of social networking and user participation features that could be applied or ported to MSNBC.com. When new editorially oriented development projects come up at MSNBC.com, a team within the company called

Creative Development decides how they will implemented, dividing up the work among its staff, and deciding which parts to outsource or give to other development teams. Upon its acquisition by MSNBC.com, Newsvine became a unit within MSNBC.com to which these sorts of tasks could be assigned, and as requests rolled in they gradually became increasingly responsible for building features for MSNBC.com—especially to support its user-participation functions as well as those of NBC News and MSNBC TV. Over the years these included the Nightly News Discussion club, an online discussion forum accompanying the broadcast of Nightly News, which prefigured many aspects of the contemporary efforts of network television at hosting a “two-screen experience” via social media like Twitter and Facebook. Newsvine also developed “question boards” for MSNBC.com as a replacement for the Blue Site’s standard user polling feature. Question boards, which are still in use today, allow users to vote on a survey question, but also to offer a reason for their vote, and to participate in a discussion thread about the issue behind the poll. Each of these different development projects could be the subject of its own article and substantial discussion. Presently, I’d like to discuss one major project undertaken by Newsvine—MSNBC.com’s blog redesign—as blogs have become a major component of the way MSNBC TV content gets distributed online, casting back to details from previous development projects where appropriate. Before I can proceed with this discussion, however, I must first introduce two additional pressures on the Newsvine system that emerged from the time of its acquisition.

The first of these is the rise of general interest social media. When Newsvine began, and at the time of its acquisition, many startups, venture capitalists, and tech industry commentators believed that the future of social networking would be in the facilitation of niche communities.

Rather than a few massive social networks, the majority of people's participation would take place on smaller social network dedicated to every imaginable topic and specialized interest.

Mark Budos recalls,

It was the whole *Long Tail*.⁶⁶ That was the book that everyone was like, that was going to take over the world. It was going to be great because you'd have all these sites that would be talking about all these little niche subjects. ... Newsvine still has a place, which to me is, you're still able to leverage those niche subjects. And you're still providing a forum for people that want to participate in that. It's not this sort of purely vanilla, generalized platform that forces people to be able to talk about anything. We're really trying to focus on news-specific people, that really like the news, and then they can kind of create their little pockets and communities throughout our product to satisfy their needs.

MSNBC.com, meanwhile, was developing a business strategy that involved targeting different segments of the news market with different products. This meant targeting the same consumers under different contexts: "We know that people want news in different ways in varying circumstances," said Tillinghast in a 2010 press release. "Our goal as a news organization is to provide the most relevant experiences to satisfy distinct needs" (MSNBC.com, 2010). And it also meant targeting divergent consumer groups who would be unlikely to use the same products by providing diverse offerings under different brands. The acquisition of Newsvine was one of the first salvos in this strategy of diversification. When viewed through the lens of the MSNBC.com system builders, Newsvine.com was originally intended to be MSNBC.com's

⁶⁶ While most readers will be at least somewhat familiar with *The Long Tail*, for posterity, it was a popular book by *Wired* editor Chris Anderson, which suggested that majority of online commerce and socializing would take place around niche commodities and topics.

social network offering, a community space aimed at a small, but valuable segment of the news market. The intervening years, however, saw the rise of massive general interest social networks, including Facebook and Twitter, which transformed the social network space online.⁶⁷

“[It’s] the massive decentralization of conversation,” says Davidson:

The concept of one place where people are talking to each other right underneath the content is less popular now, I think, than it was. ... It’s become less popular as Facebook and Twitter have really taken over. I talk to people who run their own blogs, who don’t even have comments turned on. ... They’re like ... “If somebody wants to leave a comment, they can just tweet about it. Or they can reblog it on Tumblr.” ... I don’t like that idea as much as a group of people who doesn’t really know each other congregating around a subject in one place. Facebook is more about, “Wow, this is interesting. I’m going to discuss it with my friends,” as opposed to, “I’m going to discuss it with whoever wants to discuss it.” Often times, however, your friends don’t want to discuss it.

“Decentralization” is an interesting way of looking at this situation. While others would point to the manner in which Facebook and Twitter have concentrated online discussion beneath their respective roofs, in Davidson’s view, the rise of general interest social networks has meant the breaking up of topical conversations into different, egocentric social circles. However defined, nearly everyone I talked to at Newsvine, MSNBC TV, NBC News and MSNBC.com saw the rise of general interest social networks generally, and Facebook and Twitter specifically, as a transformative development. From the vantage point of MSNBC.com, this in many ways altered

⁶⁷ While boyd (2008) does an excellent job of reviewing the rise of general interest social networks, there’s been little scholarly work on the impact that the ascension of these services have had on smaller, niche social networks. boyd’s review, for instance, appears to assume that because long-tail social networks were pursuing niche audiences, their trajectory has been independent of, or in response to, the rise of sites like MySpace and Facebook.

what Newsvine was good for. “When we bought [Newsvine],” said Tillinghast, “Facebook didn’t offer all these tools to create, basically, social networks within your own site. So from a tools point of view, Facebook is really supplanting some of the need we had with Newsvine.”

But while the value of Newsvine may have changed for MSNBC.com, it did not go away, and in fact it increased in many ways. As we saw in the previous chapter, the conversation economy, and especially distribution through social media, has rapidly become increasingly critical to online media seeking audience exposure. As Tillinghast put it, getting fans and social media followers to share content online is “an area where we have to get really good. Because that’s the nature of distribution these days.” And while Newsvine.com, or the “Green Site” as it came to be known internally, remained a niche product compared to the likes of Facebook and Twitter, the staff of Newsvine were intimately familiar with the technologies and principles behind social networks. In this environment, from the vantage point of many at MSNBC.com, the Newsvine office had the potential to become especially valuable as a design shop and a consulting team focused on social media technologies and strategies extending beyond the Green Site itself.

Another pressure factor that arose after Newsvine’s acquisition was the increasing need of MSNBC.com to revise its blogging platform. MSNBC was an early mainstream media entrant to the blogosphere, launching its first blogs in 2003. Its early efforts were experimental, rather than large-scale initiatives, and as a result the various MSNBC.com blogs that survived into 2010 were hosted on multiple blogging platforms, including TypePad from SixApart, and a commercial product called Community Server. The latter was produced by a company called Telligent and was adopted later as MSNBC.com’s primary blogging software when the company

began its blogging efforts on a larger scale. The Telligent platform was also the platform used by all of the NBC News and MSNBC TV programs that kept blogs through 2010. The visual design of all the blogs on both TypePad and Community Server was also becoming dated by 2010, as was much of the backend functionality when compared to more contemporary—or at least more recently updated—blogging tools. Moreover, at least in the case of Community Server, the software itself put limits on what a new blogging template could look like, which would limit the ability of designers to give MSNBC.com blogs a fresh look. While an upgrade and redesign of these tools was “sorely needed,” as one staffer put it, it made little sense from a resources standpoint to go on indefinitely upgrading multiple blogging platforms. Newsvine, meanwhile, had built a mature blogging platform to power users’ columns across the Green Site. In short, looking from the vantage point of MSNBC.com, the joint venture needed to simultaneously upgrade and consolidate its blogging CMS and conveniently owned a company that built just this sort of software.

This combination of the Newsvine team’s experience with social media fundamentals and the fact that they presided over a mature social blogging platform made the subsidiary a uniquely valuable and influential property within MSNBC.com. As Tillinghast suggested in October of 2010, the management at MSNBC.com had determined that “Newsvine, given their skill set, is really the unit we need to use to invent our future.”

I Thought This Was About Television

So far we’ve been predominantly looking at system building from the vantage point of Newsvine, occasionally switching to the vantage point of MSNBC.com for the purpose of

gathering additional perspective. This has gained us several valuable insights. At this point, we can see there is no single hierarchical structure that explains this universe of systems.

MSNBC.com can be seen as an actor enrolled in Newsvine's system, providing financial stability to the social network Newsvine is constructing. Or Newsvine can be seen as an actor enrolled in MSNBC.com's system, a property the joint venture uses to leverage one more segment of the news market. Which actor falls into which role is strictly a matter of the perspective from which we analyze the situation. From the discussion so far, we can also mine another analytical tool: *local teleology*. Which is to say, each system builder is working toward its own provincial goals. It is where these goals come into conflict with those of overlapping system builders that recalcitrance is perceived. One heterogeneous engineer's reverse salient is often another's local teleology. In the above portion of the chapter, we saw how Newsvine developed an isometrically stable social news platform. Another way of putting this is that, as Newsvine set and met its various objectives, encountered and overcame reverse salients, it was building in accordance with a local teleology. The goals, values, and assumptions tied up in that local teleology and built into that system—Newsvine's "aspirational philosophy of user behavior"—were what came under such acute pressure upon Newsvine's acquisition by MSNBC.com and its legions of drive-by commenters. Which is not to say that philosophy or the system behind it collapsed. Rather, as we've seen, Newsvine found itself with the task of heterogeneously engineering in response to new challenges, in order to preserve its local teleology or at times accommodate revisions to it, and to ensure the system it was building continued to unfold as they intended.

This conceptual understanding of local teleology and the relative nature of systems is also important in understanding the structure of this chapter. Why, after all, spend so many pages talking about Newsvine's startup phase and its acquisition in a manuscript that's ostensibly about online *television* distribution? What does Newsvine, particularly in this early period, have to do with TV? As we will see in the remainder of this and the next chapter, Newsvine and its blogging platform have come to be intimately associated with NBC News and MSNBC television programs. Today, Newsvine blogs make up the primary Web presence for many of these shows, to the extent that when MSNBC.com and MSNBC TV began considering the creation of a standalone site dedicated to the cable news channel, Tillinghast remarked that "it may make sense just to build the whole site on Newsvine."

Much of this story remains to be told, but what we've come to understand in rehearsing Newsvine's early system building efforts and its relationship with MSNBC.com is the provincial and fragmented nature of large contemporary media companies and postmodern system building. That a site with no video player, dedicated to citizen journalism could end up, within five years, providing the online publishing infrastructure for a national television news organization—generally considered one of the most centralized media institutions of modern times—and do so *while retaining its original system*, speaks volumes about the heterogeneity of contemporary media conglomerates and the power of the kludge. MSNBC.com is a quintessentially postmodern organization in the sense touched on by Chia (1995), Hughes (1998), and Deuze (2007). We can speak at times about its needs, its managerial decisions, and the systems it builds—we can *punctualize* it, to use the ANT term (Law, 1992)—but in doing so, we must ourselves be reflexive about the fact that we are ultimately employing a construction. In point of fact,

MSNBC.com is an assemblage of system builders, including but not limited to subsidiaries like Newsvine, all with provincial agendas and local teleologies that work in concert often enough to be mutually beneficial, but are just as often recalcitrant when viewed from different perspectives.

In the remainder of the chapter, we will find more rich examples of local teleology. To better understand what happened next with the addition of Newsvine blogs to MSNBC.com, we will need to introduce additional heterogeneous engineers into our already complex universe of systems. In the first half of the chapter, we came to understand that the Newsvine system is irreducible to—and not even primarily concerned with—online television distribution, yet still an influential component of it. In the second half of the chapter, we will introduce a number of the teams responsible for MSNBC TV’s online content. And it should come as no surprise that their work is equally irreducible to, and only peripherally concerned with, Newsvine. This shift in vantage points will prove even greater than the ones we’ve encountered so far, and will serve to deepen and advance the points made in this section.

The Rachel Maddow Show

This last half of the chapter will feature the system built by the MSNBC TV staff and MSNBC.com Web producers working with The Rachel Maddow Show (TRMS) to produce an online presence for the program. For the cable news industry, TRMS has grown into a great success story of television on the Web, consistently charting at the top of many popular online audience metrics. As we saw in the last chapter, online cable news sites have become one of the leading sources of News for Americans, consistently outpacing even the leading online newspapers traffic-wise (Joyella, 2011). Amid this audience landscape, Experian Hitwise, a

ranking tool eyed by many in the media business, consistently lists TRMS among the top three sites attached to cable news programs (Cohen, 2011a; 2011b). According to both comScore and MSNBC.com, TRMS' audience consumes more online video than any other at MSNBC TV (Plessner, 2011), and Maddow herself has more Twitter followers—well over 1.8 million—than any other television journalist on Twitter (“Social TV Leaderboard,” 2011).

How did this network of distribution resources come to be? As we learned in the previous chapter, to understand online distribution it's not enough to look at a Website or a Twitter account in isolation. Just as it is limited from a sociological point of view to conceptualize an airplane apart from a vast infrastructure of airfields, fuel depots, and traffic controllers, we have a long way to go to understand the success of TRMS' online distribution system, or those of other MSNBC TV and NBC News shows. In what follows I will focus on the heterogeneous engineering of TRMS' online presence, referencing the vantage points of other shows and units within MSNBC TV and MSNBC.com—including Newsvine—as these become relevant.

Engineering TRMS

Preliminaries

The classic ethnographies of television news production, including Gans' (1980) *Deciding What's News*, and Schlessinger's (1978) *Putting Reality Together*, were written before the advent of 24-hour cable news. Each portrays the assembly of an evening newscast as a massive undertaking, and it is. One of the substantial differences, though, between a broadcast and a cable news program is the size of the staff responsible for putting it together. Compare The

Rachel Maddow Show, which is today the premiere evening news program at MSNBC TV to its flagship counterpart at NBC's Nightly News. Nightly is assembled in NBC News' central newsroom, which takes up a substantial portion of the General Electric skyscraper's third floor. Nearly the entire staff of TRMS, by contrast, are seated at two small rows of desks in an office suite that holds half of MSNBC TV's television staff. There are many network newscasts for which the anchor is largely a figurehead, if for no other reason than that it is impossible to be personally involved in every aspect of the expansive news gathering operation.

Network news programs—especially newsmagazine shows—are also at times less a platform for the anchor and more a showcase for the work of network correspondents. Cable news anchors, by contrast, are part of small staffs that work and travel together in a tight-knit group. They are often intimately involved with nearly all aspects of their own programs. One key to understanding the situation is that much of cable news commentary—and perhaps especially The Rachel Maddow Show—is closer in its editorial form to talk radio than to a network news broadcast, and the agenda for it is as much set by what the host wants to talk about as by the news of the day. And in fact, Maddow got her start in talk radio, and has carried many of the elements of her political radio show over to TV.

Numerous producers gave very similar descriptions of the program's editorial process, describing their jobs as revolving around locating stories that would interest the host. A representative passage comes from Bill Wolff, one of TRMS' executive producers, who doubles as MSNBC TV's vice president for primetime programming:

The challenge of producing it [the show] is to pore through the news, and then do your best impersonation of Rachel Maddow in your head, which probably won't be very good.

And then try to present to Rachel what you think will be the most compelling stories of the day to her.

Maddow herself explained her close involvement with the editorial direction of the show, saying,

I need to be comfortable with whatever is represented as part of, or derivative of this show, because people conflate me and all that is The Rachel Maddow Show. So, if I am conflated as an individual human being with all editorial product that comes from this show—both the TV show and everything that we do online—it’s essentially putting my signature on everything that we do. And so I’ve got to be okay with it.

The reason it’s important to understand the depth of involvement Maddow has in the program that bears her name is that it also helps us to grasp the extent of the influence she wields at MSNBC. According to some sources, MSNBC TV executives were initially reticent to give Maddow her own program (Pressler, 2008), but when TRMS debuted in September of 2008 it went down as the most successful show launch in the network’s history, garnering numerous accolades and awards over the course of its first year (“Rachel Maddow: Host,” 2011). By the end of its first month on the air, Maddow had doubled the ratings for her timeslot at the cable channel (Hood, 2008) and by 2011 MSNBC TV president Phil Griffin was touting Maddow as the channel’s “biggest show” (Kurtz, 2011).

The point of mentioning all this is not to aggrandize Maddow or the program, but again to illustrate her influence. Maddow was synonymous with her program, both to audiences and staff, and her program quickly became a highly competitive franchise at a channel that to that point had generally wanted for ratings. This early and sustained success gave her a great deal of influence within both the cable channel itself, where she had quickly become a hot commodity,

as well as at MSNBC.com, which was also eager to cash in on her success. And one of the things that Maddow wanted most was a robust Web presence for the show.

Amid all the profiles and celebrity buzz that emerged in the months following the launch of the show, one of the more popular factoids to emerge was that prior to making the move from talk radio to cable news, Rachel Maddow did not own a television set (Battaglio, 2008; Pressler, 2008). Rather, she has consistently described her information habits as revolving around the Internet (Battaglio, 2008; Pressler, 2008), telling interviewers “anything I want I can find online” (Couric, 2011) and describing her avoidance of other television as “purposeful naïveté” (Pressler, 2008) aimed at preventing the show from becoming derivative of other cable news. It’s fair to argue that her foregrounding of these facts to the press were about painting an interesting public persona. But rather than dismissing them, we should recognize (a) this does not necessarily make them an inaccurate description of her information habits, and (b) the Internet-savvy public persona she put forward was, in effect, creating a Web-friendly brand for herself and her show.

As the head of MSNBC.com’s TV-Web producer team, Sam Go, put it, “[Maddow is] Web-savvy. So she also requires that of everyone around her.” In keeping with this observation, the staff at TRMS are immersed in print—albeit online—journalism and the political blogosphere. Television journalists start their day by “reading in”—catching up on the days news and looking for story ideas by reading the papers—an aspect of their work that long predates the Internet (Hetherington, 1985; Schudson, 2003). For many politically oriented news programs, and especially for TRMS, this process has not only moved online, but expanded to encompass a greater diversity of sources. Vanessa Silverton-Peel, for instance, a TRMS

producer who had come with Maddow to MSNBC TV from a previous job in radio, described her daily reading-in as consisting of “six newspapers and probably thirty different blogs” ranging in their subject matter from politics to war to foreign policy.

When I talked with Maddow, she again foregrounded her personal media habits and how these played out in her own—and consequently, the show’s—desire for a strong Web presence:

I think the reason that we have prioritized the Web,...the reason that I am interested in the Web is because the Web is my only source of media. I don’t watch TV. And I don’t read anything that’s not online. Like at all. I really don’t have any experience of any media in terms of my understanding of what’s going on in the world other than what happens online. And so for me, us having a substantive presence online is almost an existential question. If it’s not online it doesn’t exist in my world. So if we’re not online, we don’t exist.

Again, it’s worth recognizing that Maddow’s characterization of herself and her affinity for the Web, here and elsewhere, while not false, are also part of an important mythology that has helped to push forward TRMS’ online efforts. From the beginning of her time at MSNBC TV, she publicly foregrounded the Web. Just what should constitute a robust online presence for the show, however, was a subject highly dependent on vantage point. The development of TRMS’ Internet footprint is both a tremendous example of heterogeneous engineering and an important demonstration of local teleologies at work.

“Everything Has to Wait”

Maddow and her staff wanted to launch a blog as their TRMS homepage, an idea that turned out to be unexpectedly difficult. After all, many shows at NBC News and MSNBC TV

kept blogs on MSNBC.com, from the Nightly News to Hardball. As far back as 2007, MSNBC.com had claimed publicly that the Community Server blogging platform gave them the ability to spin up new blogs quickly and easily (Telligent, 2007). To understand why a blog was not immediately in the offing, then, we have to step temporarily into the vantage points of MSNBC.com's Redmond development offices and Newsvine, respectively and find out what was different this time around.

You'll recall from the previous half of the chapter that MSNBC.com had decided to move from its Community Server blogging platform to Newsvine-powered blogs. This in itself was not a reason for delaying the TRMS blog. The issue was that the Blue Site was in the middle of a redesign, not just of its look, but also of its underlying architecture—an incrementally delayed development project that ultimately took two years from start to finish. Architecturally speaking, the new blogging platform should have been immune to these delays. It was built on Newsvine's codebase and hosted independently using Newsvine's Linux servers, rather than the Blue Site's Windows system. However, the Newsvine blogs would exist under the MSNBC.com domain, rather than as part of the Green Site, and the designers at MSNBC.com were concerned that the *look* of the new blogs be consistent with the new visual identity of the Blue Site. That meant waiting to launch the new blogging platform until the redesign of MSNBC.com was nearly complete. According to Davidson,

We would have liked for the process of getting MSNBC onto our platform to have taken two or three months. Because design ended up taking a lot longer on their [MSNBC.com's] side it dragged on for probably over a year. ... As far as we were

concerned we could have launched blogs, let's say six to nine months earlier than we actually launched.

Nor were Newsvine blogs the only development project caught in limbo during the redesign. Will Femia, the MSNBC.com Web producer assigned to TRMS recalled that numerous projects were in the mix, including the site's lucrative video player, discussed in the previous chapter,

This happens every once in awhile, that we [at MSNBC.com] have this idea of what we're going to do, so everything has to wait because this new thing is coming. But then the new thing gets bumped. And now we've already been waiting six months, and now we have to wait another six months for the thing that just got bumped, so now we'll have been waiting a year and not having advanced at all. ... The story page redesign hogged up all the resources and was the number one priority. Everything else had to wait. Not just blogware. Blogware wasn't even second. Blogware was like down [in the queue], you know? Video player actually makes money. Video player was in there waiting.

In short, the TRMS blog request was caught in the middle of a long production cycle.

Community Server blogs were being phased out, and Newsvine blogs were not yet ready, tied as they were to the release of the Blue Site redesign.

Making matters more complicated was the fact that Maddow was displeased with the standard microsite template for MSNBC TV shows. This template, which is dominated by a video player with a grid of links beneath it, makes a great deal of sense from the vantage point of MSNBC.com. It prominently promotes video, which as we saw in the previous chapter is a particularly valuable commodity for the Web venture. Moreover, many shows and anchors contributed relatively little content to the Web beyond the repurposed show clips that went into

the player, and there were quite possibly television personalities who looked on contributing to the Web as an unwelcome obligation or a distraction from putting out a newscast, as opposed to an opportunity for engagement or exposure.⁶⁸ A number of shows in the past had started blogs, only to all but stop maintaining them. Cathy Finkler, an MSNBC.com Web producer who works with the cable shows, spoke enthusiastically about the online efforts of MSNBC TV shows throughout my interview with her. At the same time, she said, even now that blogging software is again readily available,

We don't just snap our fingers and then this show has a blog. No, the show has to realize that when they have a blog it's not just going to be my blog. They have to contribute. They have to come up with ideas. And as much as we want to say, "Refer to Maddow's blog. Look at how great this turned out," they also can't just start copying Rachel's blog from start to finish. So, from there we have to try to figure out which shows really want a blog and which are going to say they want one and then a week later the blog's going to be empty. That could be a problem.

Making video the dominant feature of the microsite templates was one way in which MSNBC.com was able to highlight the content shows were guaranteed to contribute—i.e., video—while downplaying potentially dormant blogs or other types of content that might not be as forthcoming. For that reason there had been shows that the template served very well.

Moreover, one of the first MSNBC TV shows to be based off this template was Keith Olbermann's Countdown, the microsite for which was launched in June 2008 (Learmonth, 2009;

⁶⁸ I have no firsthand knowledge of this, but it was the case at many networks. A representative quote comes from ABC News' Judy Muller, who wrote in 2005 about her reticence to blog:

As if we didn't have enough to do? Most reporters already have to file stories for a variety of platforms, as we call them: TV, radio, Internet, digital programming. Imagine if we had to keep running diaries of what we're doing as we're doing it. Imagine a surgeon trying that. ... [It] would be a malpractice lawyer's dream.

Plessner, 2008). Olbermann was active online, but his reputation for unapologetic partisan commentary made his Web contributions the object of voluminous and frequently incendiary user comments, which spilled over onto forums and blogs across MSNBC.com. At the time the original template was designed, the dominance of the video player over blog posts and other forms of content with relatively greater affordances for user commentary, may have been a design strategy aimed at minimizing the amount of belligerent feedback the site received.



Figure 3.6 // The Rachel Maddow Show Microsite

Aside from a few cosmetic changes, the above microsite for The Rachel Maddow Show has remained largely unchanged since it launched. The key difference, is that the standard space for links at the bottom of the page has been replaced with a forwarding message encouraging users to visit The Maddow Blog.

Finally, as discussed in the previous chapter, the show microsites themselves were one means by which MSNBC.com was able help surface MSNBC TV's "op-ed television" content while keeping the bulk of it distinct from the content of the Blue Site cover and the latter's non-partisan editorial image.⁶⁹ In other words, from the vantage point and local teleology of MSNBC.com there were numerous heterogeneous factors, having to do with finances, branding, editorial philosophy, and human resources, that played into the design and implementation of the show templates. From the vantage point of Maddow and her newly assembled show staff, on the other hand, the original show template and the numerous delays surrounding the blog, instead appeared as reverse salients. Maddow recounted, in terms very consonant with the notion of heterogeneous engineering, how TRMS went about creating its Web presence:

We realized pretty early on that MSNBC.com was not our Website. And so therefore if we wanted to have anything useful online, that we were going to have to do it ourselves. And so we essentially set about corralling the resources that we could that were already being made available to us and maximizing any other resources we could apply to the problem so that we would have a Web presence that made sense. What MSNBC.com built for us was essentially a generic single-frame Website with a video player in it. And [*facetiously:*] a place for links! It was like 1998. It was 1998 with hinky flash video. It was really, really totally useless. And so when we wanted to have something that actually had some content on it, that wasn't just a competitor with our TV show for ratings because it was a video provider—For us to actually have written word-based content, which is what I think all the most useful social media is, we built it ourselves. And so we

⁶⁹ You may recall that "cover" is MSNBC.com's term for the front page of a site.

went through a months-long fight with the powers that be here in order to essentially get the freedom to do our own thing and have it go up alongside our official Website, which now still has the better URL and is totally functionless. So we have a worse URL that we built on our own that's all our own functionality, all our own design, and has none of their stuff on it, run by all our own people. And we exist alongside the corporate structure that they won't let us shirk.

Maddow's description of the process by which the current TRMS Website came to be is a profound lesson in local teleology. That one show staff could define its online distribution requirements and ambitions in a manner so differently, not just from a partner organization within the same media conglomerate, but also from other shows working out of the same office suite, helps to drive home the point that today's large media organizations aren't homogenous or monolithic in their culture or in their objectives. Importantly, this is not a criticism of MSNBC.com or MSNBC TV, nor any their parents or subsidiaries. As I elaborate in the conclusion to this manuscript, it's equally simple to find examples of divergent local teleologies, not only within other television networks, but among born-digital media companies like AOL and Google.⁷⁰

Maddow's critique may be somewhat overstated—there were in fact designers and engineers in Seattle and Redmond who were intimately involved in helping to design and build the new TRMS site to which she refers. But as we'll see her emphasis on the amount of work

⁷⁰ As a few examples, a number of editors of the tech blog Engadget were rumored to have defected from AOL over their dislike of its slow-to-evolve content management system (Winer, 2011), while Google has acknowledged that its release of Wave cannibalized the efforts of and market for its other product teams, including those working on Gmail and Buzz (Gray, 2010). As an example from another legacy news company outside of television, when the Washington Post Company consolidated its online publishing tools onto a single CMS this year, the paper's ombudsman Patrick Pexton opined on the new system as "a bafflement to most of us trying to figure it out. Every newsroom employee is struggling with it, not just the tech people. And it has a horrible name" (Pexton, 2011).

involved and the number of different resources that had to be enrolled to create what is today, by many metrics, one of the most successful cable news sites ever, isn't disingenuous.

Hughes (1987) points out that reverse salients often form around otherwise helpful components of systems that serve as resources to the system builder, but also limit the output of large systems until they are updated, engineered around, or brought into phase with the rest of the system. In just this way, we've come to understand in our discussion to this point that reverse salients are seldom merely obstacles, but rather recalcitrant aspects—when seen from a particular vantage point—of actors that are otherwise important resources. The TRMS site would likely not have achieved its present popularity without MSNBC.com's seamless video delivery system and its powerful data centers, but it depends as much or more on TRMS' well-developed capacity for creating and showcasing compelling content across different media. Rather than trying to reach a specious conclusion about which system builder had the “right” idea when it came to assembling the Web presence for TRMS, we would do better to recognize the presence of different local teleologies simultaneously at work, to trace out the various overlapping systems in play from different vantage points and learn something about how they interact and influence one another.

Marshaling Resources

A Full-Time Web Producer

As we saw in the previous chapter, from MSNBC.com's perspective, MSNBC TV and NBC News are only two—albeit an important two—of a growing range of content providers in the “MSNBC Digital Network.” In recent years, television content on the Blue Site has been

handled by a small team of MSNBC.com Web producers based out of the Web venture's New York offices in Rockefeller Center. Their job has primarily been to help repurpose televised video for the Web and to maintain the various microsites dedicated to MSNBC TV and NBC News shows. They are also frequently responsible for helping to maintain—in whole or in part—the content of various blogs, mobile applications, and social media accounts started by or on behalf of the TV shows and their staffs. While the microsite templates are generally very similar to one another, shows have tended to differ greatly in their embrace and use of these other platforms. Some shows have numerous social media accounts, while others have few. Some are filled with personal interaction while others are primarily used to post headlines. And as we saw in the previous chapter, mobile applications, where they exist, are relatively diverse in their design and content. Sam Go, who leads the New York team of MSNBC.com TV-Web producers, described the workflow for the different shows as being similar overall, though different programs could be more or less demanding:

I think what you find is that the shows are different. Some of them are more involved than others. But at the end of the day they very much want the same things, which is the content to be on the site, anything related to be easily findable on the Web, and social distribution. Those are kind of at its core.

In other words, while various programs have unique requirements, the differences between the tasks required of Go's team for most programs should not be overstated. And owing to limited resources, most of them are done by the same people. At the time I visited in October 2010, one person, for instance, handled the Web content for all of the shows that aired weekdays on MSNBC TV between 11 a.m. and 7 p.m., while others took similarly large chunks of the TV

roster. To keep up with the demands of such an expansive schedule, the different Web producers often pitch in to help with one another's tasks.

The exception to this block-scheduling of Web producers, as you may have guessed, is The Rachel Maddow Show, which was able to procure a single, dedicated Web producer from MSNBC.com in the form of Will Femia. Femia has been working with MSNBC since the late 1990s, managing Websites, chat rooms, blogs, and online communities for television and the Web since long before the term "Web producer" became common parlance among journalists. Hence, in dedicating him to a single show, not only was TRMS acquiring a full-time producer from a Web team with a thinly spread staff, it was also getting one of MSNBC.com's most experienced television personnel—a major reapportioning of resources. Bill Wolff, MSNBC TV's vice president of primetime programming, and an executive producer of TRMS, said that, from the vantage point of the show, Femia appeared as an underutilized resource:

Will's been around for a long time. I mean Will was here when I got here five years ago. And he was like, "I'm the Internet guy." "Okay! Well, do whatever you want to do, because we could sure use the Internet." ... He had a bunch of different shows he had to do. ... And he's really good at it. That I already knew. So here we came with the Maddow Show. ... And we thought ... Will's supposed to be an MSNBC.com guy doing stuff for MSNBC TV shows. Only nobody really capitalizes on him. ... Everybody's working really hard to get their jobs done, and doesn't have time to think about the Internet or doesn't understand it. ... And then he gets ignored and nothing comes of it. And we just sort of said, "Well, why don't you come to the show meeting every single day? Why don't you just be part of the show, the show's operation."

Meanwhile, from the vantage point of MSNBC.com and its East Coast television staff, Femia was far from under-capitalized. Femia recounts how the decision to reapportion his duties, which appeared an improved use of resources from the perspective of TRMS and MSNBC TV, put a strain on the resources of MSNBC.com:

[The Rachel Maddow Show] was still new. And this is actually kind of funny. I hadn't met Rachel. She went out to Redmond. And we had a teleconference. Like, I met her by teleconference when she was in Redmond, rather than 20 feet away from me in the building. And I was there basically to chime in about our tools and stuff, just to be a nerd in the room. But someone had made the mistake of saying, "Whatever you want, let us know." And she said something like, "Who's your best guy?" And they said, "Will." She says, "Okay, I want Will." And then, you know, they'd already said, "Whatever you want." [*laughs*] So that's where that came from. And it's not like we had the resource to spare. It has been a good experiment, and a good way of showing what it's like when a show has a dedicated Web person. But for the amount of work that Sam's team has to do, to say one guy is devoted to a show is a poor use of resources from that standpoint. ... If you said, "Oh, Sam, you have...all the shows except Today Show." So, Meet the Press, Nightly News, Way Too Early, Morning Joe, Jansing & Co., NewsNation, Andrea Mitchell Reports, Dylan Ratigan, Hardball, Ed, Countdown, Maddow, Lawrence O'Donnell. You have two staff members [for all those shows] and people who do Nightly, Meet the Press, and Dateline exclusively. How do you want to use those two staff members? Put one exclusively on Maddow Show? Like, that's crazy. The point is, having a dedicated guy for one show is weird.

Importantly—and what may not be clear without additional context—Femia was not critiquing the apportioning of resources or his placement with the Maddow program, but rather illustrating the magnitude of the decision. In the terms we’ve been using, TRMS’ recruitment of Femia—during the month in which she doubled MSNBC’s Nielsen ratings—put rending pressure on what, from the vantage point of the MSNBC.com’s East Coast television team, had been an isometrically stable system.⁷¹ In light of this, it’s interesting to look from the vantage point of MSNBC.com, to understand why they made the concession and what they gained through it. Maddow, through her radio show, her guest appearances on MSNBC TV, and her other work in media, online and off, had developed a substantial online following, among whom MSNBC’s decision to give her a show was especially popular. When announcing that Maddow would be receiving her own program, Keith Olbermann recounted on his show the reactions of several major progressive blogs and sites:

A website called “The Progressive Puppy” calls it the quote, “single smartest move ever made by a television network.” ‘The Nation’ already identified her in these terms:

“Everything about her radiates competence and a deft, bright careerism.” And at the website Daily Kos, there was, upon the news late this afternoon, posted this poem: “For Unto Us, a Star is Born. A Gift is Given.” (Olbermann, 2008)

This sort of online reception was obviously welcomed by MSNBC.com, and the company was thus willing to shuffle a few resources to capitalize on it. Randy Stearns, MSNBC.com’s East Coast Deputy Editor, to whom Sam Go reports, recalled,

⁷¹ It’s important to note that, while my sources referred to Will as being the only MSNBC.com TV-Web producer dedicated to a single cable program, owing to the limited resources of the TV-Web producer staff, Femia continued to pitch in and help out with other primetime programs. So, while it’s unequivocally true that he dedicated more time by far to a single show than any other member of the team, it’s not entirely accurate to say that he no longer worked on other programs.

When [Rachel Maddow] joined the MSNBC lineup, we courted her pretty heavily because she's a digital native; she and her EP [Bill Wolff] get it. To her credit, she and her executive producer came out to Redmond and met the news team, talked about how we could work together. We designed a site for her. We dedicated Will [Femia] to work with her team—the first time I'd ever dedicated a producer to a single cable show.

(We've never had one person dedicated to a particular show, because we couldn't afford it). And they've done great stuff—on TV, on the Web and, more recently, for devices like the iPad.

Moreover, both Stearns and Go emphasized one aspect of Femia's quote, above, which was that assigning Femia to TRMS was a demonstration of what would be possible for the cable shows online, if only more resources were dedicated across the board. Sam Go described the situation saying,

Will does Maddow, and it's a strategic decision on our part to have him spend more time on that show. You need that kind of model, a prototype for how it could be done. And that's spoken well of our company, when we [the East Coast offices] deal with MSNBC.com. It's like, "We didn't treat them all equally. We are trying to experiment aggressively with one show that does more of this kind of content than the others."

Elsewhere, she continued:

I think it would be a less productive use of time to devote those resources to Hardball, because they're not as committed to producing for the Web, or they're already understaffed for their main priority—television. So you kind of put your resources where,

you know, where they might make a difference, considering you have a few. Like, ideally, would I want one person for every show? Yes, of course.

Here we can see the duality of actors within systems, how they are seldom strictly a resource or an obstacle from the vantage point of a given system builder. Will's dedicated assignment to the Maddow team might have been seen as a strain on the systems put in place by MSNBC.com or by Go's team, but it was reframed as a resource in each case—the capture of Maddow's online brand and tech savvy audience for MSNBC.com, the opportunity to demonstrate the potential benefits that would come with the addition of resources to Go's Team. To the extent that Femia's new assignment became an imposition on other parts of these systems, it was regarded (in our terms) as recalcitrance—a difficulty to be engineered around through reapportioning of the remaining staff's duties and other means, for the sake of the larger benefits TRMS brought to these systems.

Using Outside Services

Even once TRMS had a dedicated Web producer, it still didn't have a blog and its microsite didn't offer many opportunities for interactivity. To get around these problems, Femia, at the behest of TRMS helped in kludging together a number of workaround solutions. Some of these involved MSNBC.com resources—Maddow, for instance, participated in Q&As surrounding her regular “Talk Me Down” segment on the show, in which she discussed a current policy or event and why its consequences were potentially negative, then invited an expert onto the show to give a reasoned counterpoint to the issue she was concerned about. After the program, a written version of her argument would appear on Newsvine, where users were invited to offer their own counter-narratives. Moreover, in addition to the video player-centric microsite

template, cable shows are also given the option of maintaining an informational page on the tv.msnbc.com microsite, dedicated to the cable channel. Femia used this slightly more flexible template as a place to aggregate information on Rachel Maddow and TRMS from across the Web, including that contributed by users and fans. It contained various features that would ultimately be assumed by the blog, including a section for primary documents related to stories on the show, links to podcasts, a listing of Twitter accounts related to TRMS, links to Maddow's guest appearances on other programs, as well as to press clippings and profiles featuring her.

Elsewhere, TRMS and Femia went outside the normal resources of MSNBC.com, starting a TRMS account on Flickr to create embeddable slideshows and accept user-contributed photos, for example, and another on a site called Dipity, which generated interactive timelines. When TRMS discovered that fans of the show were frequently posting quotes from the program to their blogs and Twitter accounts, Femia created a page on WikiQuote where audiences could assemble all their favorites in one place. These sorts of specialized third-party Web accounts multiplied over time, and for a variety of reasons. One was that, while the blog was still in limbo, there was little infrastructure on MSNBC.com to host a centralized user community around TRMS—at least not without committing to a solution, like the Community Server platform, that would end up being rebooted or dismantled in a matter of months. In light of this, it made more sense to seek out communities of users around the Web that were already engaging productively with the show, then to highlight, and where possible facilitate, their contributions. This strategy not only served to outsource the community functionality of the as-yet nonexistent blog, it also promoted the circulation of TRMS content in different conversational spaces across the Web, helping to extend the conversation economy surrounding the show. In this spirit, to the

tv.msnbc.com page for TRMS, Femia added prominent links to Maddow fan sites, samples of user-submitted art and commentary, as well as links to WikiQuote and other interactive TRMS account pages around the Web. The top of the page prominently featured a slideshow of the latest TRMS-related photos from Flickr, submitted by both users and TRMS staff. The TRMS page was thus a pointer to distributed activity around the Web, rather than a host to it. As we'll see, these impulses are not mutually exclusive—the Maddow Blog today continues to embed and point to many off-site resources. However, owing to the lack of community affordances on MSNBC.com only one of these options was available to TRMS starting out.

A second reason TRMS started numerous discreet social media accounts revolved around a strategy on Femia's part for engineering the quality of user contributions. Accounts on specialized services—a quotes wiki, a timeline tool—served as framing devices for user contributions. More than one Web producer I talked with at MSNBC.com noted that belligerent behavior by users could be minimized by giving them a suggested course of action wherever feedback was requested or allowed. Ian Sager, for instance, who at the time I talked with him was the MSNBC.com Web producer for NBC News' weekend programming, said,

We've started posting questions along with [stories] when we post to Facebook. ... Not necessarily "What do you think?" But like a point that's going to get people thinking so that their first thought is not like, "God, this writer is an idiot." [There was a] story about a guy who lived on coupons for a year. We posted the story yesterday on Facebook and along with the question, "Could you actually live on coupons for a year with no cash, no credit?" And just so the first response people have is not, like, "What a dumb story." And of course there are people who are going to say that, too. But it also cuts down on

that. A lot of people write back and say, “God, no I could never do that. I couldn’t live on coupons for a year.”

In other words, these rhetorical attempts to frame the sort of contributions that are welcome in advance were something that cut down on the amount of moderation and surveillance that were necessary across a show’s Web presence. Femia regarded the Maddow show’s niche social media accounts as another way of going about this:

I really feel like the new community model is “constructive engagement,” not “open engagement.” And by that I mean give your people stuff to do, and you get more relevant return. Open up a comment thread and you get bullshit. And what’s more is, you have to waste time dealing with the bullshit. It can’t just be, “Well, there it goes.” Like, suddenly it’s *your* bullshit that you have to deal with. So that’s why we had Flickr for images and we had the WikiQuotes page for quotes. And her [Maddow’s] celebrity appearances was like a whole separate page that I was maintaining, and her fans would spot stuff that she would do and submit it and we’d pull it all in and make a big, you know, database out of that. There were just more facets. I didn’t have a hub at all, which is what the blog is now. So instead I had just all these crazy-ass satellite...third-party things. [emphasis original]

Finally, the third party accounts at times simply gave TRMS functionality that it did not have through the MSNBC.com Website, or that would constitute more work for less benefit to obtain through MSNBC.com. For instance, while the Blue Site had no easily embeddable slideshow widget at the time, the Flickr account not only provided TRMS with such a tool, but also came with social features and a simple to use interface that was easily accessible, not just for

MSNBC.com Web producers, but also to audiences and to TRMS staff who had seldom worked with the Blue Site's CMS before. This trend toward the use of outside services to supplement the functionality MSNBC.com and the reach of TRMS content continues today, as we will see.

Faking Blogware: Everything that my client wants, they're going to get.

The Maddow tv.msnbc.com page, with its grids of links, served as a location for aggregating TRMS' original Web content, as did the space for links on the TRMS microsite, where Femia would post the show's guest list, as well as links to other TRMS content on MSNBC.com, Twitter, and elsewhere. He also regularly posted links to blogs, newspaper stories, and other sources mentioned on the show, and eventually consolidated these into what was billed on the site as a "link blog"—which was not in fact built on any blogging software, but rather a standard MSNBC.com page template that Femia would manually update, and on which he simulated as much of the functionality of a blog as possible. Nearly all the functionality of the various pages Femia was creating and/or maintaining on the Blue Site was eventually assumed by the blog, when it was built. In the meantime, Femia was put in the position of bridging the gap between TRMS' expectations of a blog and MSNBC.com's slow delivery of the new blogging tool by manually accomplishing much of what it was that the blog software would eventually do. He referred to these tasks, on the link blog, and across TRMS' presence on the Blue Site as "faking blogware:"

The most awkward thing that us on Sam's team have to do as sort of liaisons between the two is explain the development schedule of MSNBC.com to the TV side. The TV side can be impatient anyway, but even when they're completely reasonable sometimes our schedule just isn't. Sometimes our priorities are different. ... But we [TRMS] wanted a

blog. And as it is, here's me faking it. That's what it was. I'm writing this fake blog with fake timestamps, fake archives, anchor-tag permalinks, everything.

The ease with which Femia slips between possessives and pronouns like “our,” “their,” and “we” that place his group membership variously with MSNBC.com and TRMS is interesting to highlight, and not coincidental. All the MSNBC.com staff in New York who deal with television are at times put in the position of having to run interference when the local teleologies of their dot-com employer and the television staffs with whom they work are out of alignment. When Femia was enlisted full time by Maddow, he became one of the individuals for whom this situation was most pronounced. As Stearns put it, “Will [Femia]’s become part of [The Rachel Maddow Show] team, even though he still reports to [the joint venture].” TV Web producers at MSNBC.com deal with the tensions inherent in their jobs in different ways. Femia described his situation with TRMS as a provider-client relationship:

[I] think of it as, like, “They’re my client. Everything that my client wants, they’re going to get. Either you’re going to give it to me, MSNBC.com, or I’m going to go get it for them.” I don’t see how there could be any other way of thinking about your job.

At first glance, this self-framing by Femia of his work role may appear to put the onus for providing resources largely on MSNBC.com, but more accurately, it paints them as only one of a larger universe of available service providers and provides one rationale for why TRMS has so aggressively sought out third-party tools as part of its Web presence over the years. When it came to the blog, however, the situation was not so clear cut. MSNBC.com was, after all, promising a blog “soon,” and hosting it elsewhere would in effect have been outsourcing the

object TRMS wanted for a homepage—which is not to say the group didn’t consider it, as we’ll see in a moment.

In the interim, between the launch of TRMS’ Web presence and the launch of the official Maddow Blog over a year later, faking blogware was not simply something Femia had been directed to do by any particular party. While it was clearly a task he incurred at the behest of TRMS, it was also a compromise he helped to create in order to knit together two local teleologies that were, if not competing, out of sync in their unfolding. Ultimately, though, the standard templates that Femia used to simulate blogware proved recalcitrant, not just in the amount of labor they required to maintain, but also in their presentation of information. The templates had been designed for delivering breaking news, not blog posts, and it showed. Femia explained,

On the front of a subsection or even on the cover, that top module that contains the top stories, that’s called a grid. But that idea of “Your story’s moving down in a blog, but always kind of being there and more sort of fading into the past,” is different from, “These are the headlines now. Boom. These are the headlines now. Boom. These are the headlines now.” That’s how things were. That’s what we had to work with, that was our tool before we had a new blog. So that also made things more disjointed, because [from a user’s perspective] it was like, “What do these links go to? Oh, they’re various satellite pages.” Not, “Here’s everything just flowing in one continual stream.”

Circumventing the limitations of template would ultimately require starting an actual blog.

Hand-in-Glove: The Maddow Blog is Born

As I say above, hosting a blog elsewhere was something that TRMS considered. Moreover, as MSNBC.com's partnership with NBC Universal largely covered video content, as opposed to written contributions from MSNBC TV, it was a very real option and one through which they were ultimately able to exert pressure on MSNBC.com for the delivery of blogging software. In the following, extended passage, Femia recounts the story from his perspective:

We couldn't get the Community Server blog because we were leaving that. Newsvine blogs were coming. Except that they're not. They never are. We're waiting months and months, and still zero. They're coming, they're coming. And there's a whole long explanation for why they haven't come yet, but the bottom line is they're still not here and they're still not coming. And she [Maddow] starts getting impatient, and she says, "Well, why are we waiting for that anyway? Why don't we just go get one?" How do you say, "Well, because." Because why? Because? And furthermore, she doesn't like the Community Server blog. She wants her blog to look like this. Well, we could get it [that template] right out of WordPress in two seconds. Rachel was a hot property by then. She was getting on all the lists, and showing up in People Magazine. ... Her PR was really making a celebrity out of her. Even internally she was a big deal. And as far as she was concerned, she didn't have any allegiance to dot-com. Her allegiance is to making sure her shit looks how she wants it. And that she can do online what she wants to do. ... She had issues about the corporate logos at the top versus at the bottom. You know, stuff that MSN mandates. It's like, how do you tell her, "No, MSN says you have to have your blog look a certain way?" She says, "Okay, so I'll just go start my own blog on Tumblr.

And what are you going to do? Fire me?”...You literally can’t do anything. What are you going to do? Complain to Phil [Griffin, president of MSNBC TV]? Phil’s going to take his new star and scold her for doing her own [blog]? Like there’s just nothing you can do. Even legally. I think the legal part applies to the video player, not to anything else. So that was the situation. That’s where we [at TRMS] got to really push and say, “Do this or we go.” You know what I mean? It was an interesting spot to be in.

JB: Was that tense or helpful for you, in terms of working with somebody who can throw that much weight behind a project?

WF: It was a little bit tense for me, but at the same time it was a great relief that I was essentially powerless in the whole exchange. You know what I mean? ... I was just subject to whatever was going to happen. I didn’t really wield any influence, other than that I wasn’t afraid to be frank even with Charlie [Tillinghast] and say, “Look, this is what’s going to happen. We don’t have an upper hand here. We don’t have any cards to play. If she doesn’t like what we’re giving her, then she goes.”

At this point, we can see a great deal of TRMS’ heterogeneous engineering to this point on display. The show leveraged Maddow’s online celebrity to obtain a (nearly) full-time experienced Web producer from MSNBC.com, something unprecedented for an MSNBC cable show. In the absence of a permanent blogging tool, it was able to make use of Femia’s skills and familiarity with both MSNBC.com’s CMS and a variety of third-party tools to mimic the functionality of a blog on the Blue Site until a dedicated blogging platform became available. TRMS also made use of their lack of contractual obligations over written content, in combination

with Maddow's influence and celebrity, to get MSNBC.com to press a permanent blogging tool into service quickly.

TRMS also made another move unprecedented within the cable channel when it hired an additional Web producer onto the television organization's payroll, marking the first time MSNBC TV had hired its own internal Web staff independent of MSNBC.com. TRMS had begun life in 2008 with a skeleton staff and continued to be run by a small team, even by primetime cable standards, throughout most of its first year of existence. Following the show's surge in the ratings and its critical success, the program was offered the opportunity to expand its producer staff, and began to hire new people. In late 2009, when one such opening came up for a new television producer, as the *New York Observer* put it, "Maddow and her team decided they'd rather spend the money on someone who would focus primarily on the Web" (Gillette, 2010). In the following interview passage, Bill Wolff explains the motivation behind the move:

We needed somebody who was going to work for our show and not have a conflict of interest with working for MSNBC.com. It's a different business. I mean, we're partners, but they have different concerns, they're driven by different profit motives, editorial motives. It's a different business from our show. And they're not to be blamed for that. But we needed somebody—it sounds a little bit harsh, but—who answered to us, and whose motives were our motives. Someone who worked for us. And so the idea was we had a couple of open positions, and...I can't stand self-congratulations, but I mean I decided it—we were going to spend a television producer head on a Web person. Because that was the only way our show was going to have a sophisticated Internet presence. No one from MSNBC.com was going to have the time or the ability to be

dedicated to making our Web presence what it needed to be. That person needed to work with us every day, be part of the show. Because what was happening on the Web needed to be an extension of the show, hand-in-glove. Like, it just needed to be the same thing, except a different format, a different platform.

It's worth taking a moment to contextualize this passage a bit further. First of all, I've already emphasized how Will Femia came to be a full-time Web producer for TRMS, which begs the question of why Wolff would suggest "no one from MSNBC.com was going to have the time or the ability to be dedicated to making our Web presence what it needed to be." While every member of the TRMS staff with whom I spoke had nothing but plaudits for Femia's work, referring to him a "critical" and "brilliant" component of TRMS' online presence, there were several limitations of his position that from TRMS' perspective warranted the hire of an additional full time Web staffer to the show's own payroll. First, while Femia was dedicated to the show full time, many of his duties revolved around the repurposing of television content for the Web—putting video online, for example. In other words, he was fully occupied before the blog was even launched and the addition of an active blog to the site would create additional work beyond what Femia was already doing full time.

Second, while Femia's schedule was ostensibly dedicated only to TRMS, in practice this proved to be something of a euphemism. Owing to the limited resources of Go's team, Femia also retained responsibility for the Countdown with Keith Olbermann microsite. While the microsite had been made as static as possible to minimize the amount of incendiary feedback it invited, and was therefore less demanding than the Web presence for some other shows, it still required regular updating, which consumed a good portion of Femia's day. And as with all the

other producers on Go's team, he would help to pitch in on the duties for other shows when necessary. Owing to all these additional responsibilities, Femia was not physically embedded with TRMS. While he attended regular TRMS editorial meetings, he conducted most of his duties from the MSNBC.com satellite offices, which are separated from the MSNBC TV offices by a hallway and a locking door. The new TRMS Web producer, Laura Conaway, on the other hand, was to be involved in assembling television segments and pitching in, along with all the other television producers, to ready the show for air each night.

In running the blog, she could speak for the show in a way that Femia could not. While he regularly writes for the blog, Femia noted to me on several occasions that he generally limits himself to topics like science, photography, or humor where there is less risk of inadvertently contradicting Maddow or the television staff by stating, say, political opinions that later turn out to cut against those appearing on the show. Most of the various TRMS television producers, whose job as we've seen, frequently involves trying to anticipate what Maddow will be interested in on a given day, discussed the difficulty of predicting what she will have to say on a given issue. In deciding what to contribute to the blog, Femia faces the same challenge without the benefit of working alongside the host. "Rachel is so independent that even the people who do sit over there often aren't quite sure what she's about to do," he remarked. "So it's hard to stay connected that way." This was what was meant by Wolff when he talked about the desire for the blog to fit with the show, "hand-in-glove."

One early idea for the blog was to regularly feature posts from television guests and other invited commentators. However, this concept was quickly jettisoned in favor of a blog that would reflect the interests, discoveries, and opinions of the people who actually produced the

show. Shortly after it launched, Maddow told the *New York Observer* that, rather than serving as an additional obligation for an already-busy television staff, the blog was conceived as a way to capture the insights and conversation that went into producing each program, and “ended up being an engine for the show. It’s a new way to collect information. We post every morning a bunch of stuff we’re reading to get ready for the show. People get on-line and point us to new stuff. We’ve had a lot of story ideas for the show generated by people commenting on the blog” (Gillette, 2010). Conaway expanded on what she felt the relationship should be between the blog and the show, which was that there should be little distinction between them:

One of the things that you have to understand. And I say this a lot, and I’m not a hundred percent sure it’s understood in here [the show’s offices]: It is not about the blog. ...

Really, it’s about the whole thing. It’s about the whole integrated thing. It’s not like, “Is the blog getting more traffic or less traffic?” It’s really not about that. It’s about, “Is the show, which now includes the blog, healthy?” So, is it doing things that surprise? Is it breaking the form? Does it have more personality? Does it have more personalities?

Did it find something that nobody knew today that made its way up? Did it talk to people?...Did the clip,...the three to five minutes that segment was on and we were doing that awesome thing—did that live anywhere? Did people get that? The blog helps make all that possible. But it’s really not about the blog. ... It’s really, truly not about the blog.

I mean the blog is hugely important, but it’s not the point. The point is the entire enterprise.

In other words, in Conaway’s local teleology—the one she was hired to pursue on behalf of the Maddow program—the blog and the show would become complementary outlets allowing

multiple platforms for the TRMS staff's journalistic pursuits—more ways of publishing, more ways of collecting and assembling information, more ways of engaging with audiences, and so forth. The blog was (ideally) a way of increasing support for and engagement with the same editorial enterprise, rather than a separate project to be judged on independent merits.

Conaway's ideas about the blog are obviously especially important here, and we will return to them shortly. For now, the comments from Wolff, Maddow, and Conaway above help us to understand the local teleology that was taking shape around the blog at the time of Conaway's hire. Because Conaway was not hired at random. She not only had a personal connection to the show in the form of her existing friendship with one of TRMS' executive producers, one of her previous jobs had been working, with Wolff's wife and another future Maddow producer, Tricia McKinney, on an NPR enterprise called The Bryant Park Project (BPP). BPP was a short-lived, experimental live news radio program named for the location of NPR's New York studios adjacent to Bryant Park. It's goal was to reach out to younger and non-traditional NPR viewers by experimenting with the live news format, and ultimately by creating a bustling online presence, the hub of which was a blog run by Conaway that developed a reputation, both as an interesting online destination and an unusually interactive site for a broadcast organization. The blog contained a great deal of interaction between the show's staff and BPP listeners and both the show and especially the blog made use of users' online suggestions and contributions. After the Bryant Park Project ended, Conaway went on to help found the award winning site for Planet Money, a new show at NPR that prominently covered the 2008 economic meltdown and also at times broke news based on users' online contributions. In other words, Conaway's approach to integrating blogging and broadcasting was far from an

unknown quantity when TRMS created a position for her. “Wherever I’ve been I’ve always done Web, plus whatever the main medium was doing,” she said.

I’ve never been solely one or solely the other. So, in a way I think what kind of marks my work is being both those things. And what that tends to make possible is the Web is able to feed the product, whether it’s a newspaper or a show. And the show is able to feed the Web. And hopefully it makes a more unified, interesting, expansive thing.

From the vantage point of TRMS, the level of integration between the shows’ various products promised by Conaway would likely have been difficult to achieve without hiring a dedicated Web producer directly to the show. Moreover, as Wolff says above, TRMS were not merely enthusiastic about the generic idea of staff Web producer. Rather, they were pursuing a particular person with a known editorial outlook. As part of this arrangement, Conaway is afforded a good deal of editorial independence with the blog on a show that’s known for the close editorial oversight of its anchor. “I’m not sure it would be that way were it not for Laura,” said Wolff. “She is a very experienced person. She is a very responsible person. And I think she’s a very simpatico person in terms of her editorial outlook with Rachel. So then, in terms of the story selections, I just trust her implicitly.”

Stepping back once more to take stock of what TRMS achieved to this point as a system builder, we can see how the show not only employed heterogeneous means to maximize their resources within MSNBC.com, gather together an assortment of complementary third-party tools, and push the site to give them a blog as quickly as possible—the staff also drew on their personal connections and redirected financial/personnel resources given to them by MSNBC TV acquire a new producer they trusted uniquely to manage their expanding Web presence. The

cumulative result of all this heterogeneous engineering was that TRMS received early access to Newsvine's tools and launched a blog on the new platform months in advance of the rollout of the new blogs across the rest of MSNBC.com.

Back on the West Coast, during this time period, around the end of 2009, MSNBC.com had actually launched one Newsvine blog in the form of the Weblog for the NBC News' Elkhart Project, an experimental reporting initiative in which the network news division opened a bureau in Elkhart, Indiana—one of the cities worst hit by the recession of 2008—to report on the economic crisis and elusive recovery from a local perspective. The template for the Elkhart Project blog was the subject of some back and forth between designers at Newsvine and MSNBC.com's Creative Development department, which is responsible for the look and much of the front-end functionality on the Blue Site. The final template for the blog came from director of Creative Development, Ashley Wells. Not entirely satisfied with the Elkhart template, Wells decided to hire an outside designer to create the standard template that would be used in the mass rollout of Newsvine blogs on MSNBC.com. In late 2009, when the Web venture decided to give an early launch to the Maddow Blog, the new designer, Martin McClellan, was in the middle of this redesign project, which was now tied not just to the creeping release schedule of the new Blue Site story pages, but also to an ongoing upgrade of the Newsvine software architecture. With the M3 architecture, as the new Newsvine code was known, the Newsvine CMS went from being highly specific to the Green site, with its specialized features and customizable widgets, to a CMS capable of being quickly re-templated to power a broad variety of sites and blogs. But M3 wasn't ready at the time, and consequently neither was McClellan's new blog template. Instead, a template was rapidly spun up by Mike Davidson based on TRMS' specifications using

the M2 architecture, which had been employed for Elkhart on the MSNBC.com domain, but only ever rolled out in beta beyond the front page of the Green Site. The result of this rapid deployment was a site that looked far more contemporary than the various Community Server and TypePad blogs that adorned the Blue Site at the time, but could at times prove buggy or unpredictable from the perspective of its proprietors at TRMS. At the same time Newsvine was responsible for ironing out these problems with the M2-based Maddow Blog, which was still one of the first-ever blogs they'd deployed for MSNBC.com, they were also rushing to complete development of the M3 architecture in time for the site-wide release of the "Martin Blogs," as the columns bearing McClellan's template were known internally at Newsvine. This had the effect of slowing Newsvine's issue-response times substantially, and the developers were aware that this probably built some frustration on the part of the part of some of the East Coast staff. Newsvine's Lance Anderson explained,

[Laura and Will are] both relatively savvy Web users, so you don't get complaints about dumb things that you get from other people. So that's nice. I feel bad sometimes for Will, because that site's been a bit of a guinea pig site. And so I think he's had some frustrations. And he might be a little frustrated with us about our response times and stuff. ... Hopefully by the time you talk to him he'll be a little happier. He sent us a mail a couple days ago. He's like, "You guys are killing me!"

Newsvine generally prides itself on its speed to market and abides by a "release early and often" development strategy, in which features are shipped quickly, warts and all, with the understanding that bugs will be eradicated with equal rapidity. Meanwhile, from the vantage point of TRMS, which had campaigned for a blog for nearly a year, the Newsvine software they

received, at least on occasions when it wasn't working properly, was the worst of both worlds—buggy software that had taken months and substantial maneuvering to acquire.

THE MADDOW BLOG

When there are no jobs

Mon Jul 18, 2011 5:37 PM EDT



Melissa Harris-Perry on what the federal government can do for states:

Here's what happens when states from localities and communities get vulnerable economically -- they willingly allow polluters to come in. And they do it because they're desperate in that short time horizon for jobs.

Look, we have no jobs. The real crisis as you have been talking about is jobs. If there are not jobs and there's a heavily polluting corporation willing to build on your creek bed, then in these kinds of circumstances, these communities have a real incentive to do so.

The federal government helps to create that longer time horizon so that states, communities, and neighborhoods don't have to make these kinds of tough choices.

Pennsylvania, Montana, West Virginia, et al, I think she's talking to you.

[Permalink](#) | [0 comments](#)

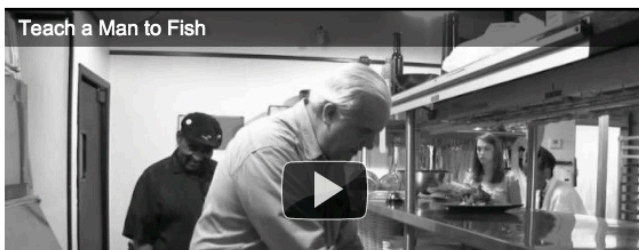
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Clean a fish, run a government

By [Laura Conway](#) - Mon Jul 18, 2011 3:43 PM EDT



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Video: GOP vote suppression effort could stave off accountability



Video: News Corp plinth threatened as scandal reaches toward Murdoch



Video: GOP goes to war against clean water



Video: Tiller, McVeigh documentaries to air on MSNBC



Video: Cyclists show disdain for the reign of the plane



Video: The Rickey named D.C.'s official drink



Video: Happy 15th birthday, MSNBC!

Recent tweets

maddow: RT @keeganuhl: #flightvsbike a success with @wolfpackhustle in first place! #LAMetro riders in 2nd, and @JetBlue still burning fossil fu ...

maddow: I hope @SenatorSanders has seen this - <http://t.co/W3JzkqB>

Figure 3.7 // The Maddow Blog

Irrespective of any initial discontents, however, the Maddow Blog did everything required of it. All of the permanent links—to Twitter accounts, fan pages, and so forth—on the tv.msnbc.com page were moved to the blog’s sidebar, and all of the “fake blogging” activity that had been manually maintained up until the launch was continued on the Maddow Blog with the help of the new Newsvine blogware. Within weeks Femia closed out the temporary landing page on tv.msnbc.com, redirecting its traffic to the blog, and similarly wiped away the grid of links on the MSNBC.com microsite, replacing it with a large graphic directing users to the blog for any purpose beyond viewing clips. Moreover, the new Maddow Blog template itself had links in the sidebar to all of the latest video clips, supplanting the need for users to visit the microsite at all. At that point, virtually all that remained of TRMS’ original MSNBC.com Web presence was that original video player page, which was otherwise devoid of content, but—as Maddow pointed out—continued to have the more intuitive link (rachel.msnbc.com as opposed to maddowblog.msnbc.com) and remained at the URL that was linked to from the header of all pages on the Blue Site. Regardless, as indicated repeatedly in the quotes above, TRMS viewed the new site, not as a supplemental blog, but as their new Website, “run by all their own people.”

TRMS’ Web Presence

At this point, we’ve witnessed the creation of the Maddow Blog from the vantage point of TRMS and the extensive heterogeneous engineering that took it from an initial idea and request for a blog to a complete Website run, in many ways, independently of the Blue Site. But the local teleology behind TRMS’ Web presence does not stop unfolding here. While Laura Conaway manages the blog and was the last TRMS hire—as of this writing—to be dedicated

primarily to the Web, Web-savviness remains a job requirement on the show. Vanessa Silverton-Peel, for instance, who came with Maddow to MSNBC from radio, had previously helped to manage Maddow's Web presence for Air America. And TRMS invited its latest producer hire, previously at NFL Films, to interview with them after they noticed and thought highly of his Twitter account. The candidate, Jamil Smith, also submitted ten blog entries as some of his primary resume items.

Femia, with the help of Conaway and others, has continued to develop TRMS' active presence on Twitter. And the show has continued to use many non-MSNBC.com services for presenting content. Without running down through each one in painstaking detail, a single example will suffice. In addition to Flickr slideshows, which continue to appear periodically on the blog, TRMS has made particularly heavy use of the video sharing service Vimeo to present its video tweets, other behind-the-scenes footage, and at times even news reporting. There are several reasons for this. One is that posting to a social site like Vimeo makes TRMS content discoverable in another venue. Posting a video to Vimeo is also frequently much faster and simpler—particularly while traveling—than going through the more formal process of flipping a video through MSNBC.com's CMS. And finally, the MSNBC.com player, with all its branding and news-video playlisting, can at times carry with it a formality that the producer wants to avoid with a clip that is exceedingly brief or intended to be light. Conaway explained,

It depends on what I want that video to do. Sometimes it depends where I am. In that case [when she posted a video of Maddow waking up on a plane to Nevada] I was on the road. And I didn't have time to deal with flipping it to anybody else. I just flipped that thing in Vimeo and called it a day. I mean, you know? Like, "Decision one, I have five

minutes.” You know, if I have to flip it for MSNBC, then that means that all of a sudden MSNBC has to own this video as a corporation. And they didn’t necessarily go out and assign this video of Rachel in bed-head. You know what I mean? It’s not like a finished segment that it has to live alongside of. It’s just this kind of silly thing. So, I can take it and flip it for Vimeo. We’re doing this more and more: Right before the [live-audience] show in Anchorage, Tina handed me the FlipCam. And literally, like three, four minutes before the show. She hands me the FlipCam and she had 20 seconds of room. Just the chaos in the room and the energy in the room. And I just jammed it into the machine, threw it on Vimeo. And didn’t even blog it. I never blogged it. I just tweeted it. It was a way of saying, “Look!” You know, to this little dedicated audience who help us all the time and are there with us and watching us and stuff. Like, “See, this is what you’re about to see.” And in a way it’s a pitch for the show, and also it’s a way of just being like, “Hey, you guys, you got my back, right?” Like, “You’re looking at this the same way I am.” And that doesn’t need to go on MSNBC.com. Right? That process takes longer and there’s no reward for that. I tend to like to put things on Vimeo and put them on the blog in Vimeo form because I think that they are friendlier...and so I think people will move them around.

Here we can see a few of the numerous problems to which Vimeo has become a solution for TRMS. It allows them to deliver video to viewers more rapidly and easily from the road, which is a rather large affordance. In fact there is no standard method for publishing video from the field. Generally field reporters, if they’ve shot something themselves, will have to send it back to MSNBC.com—a process that involves (a) locating Internet access, and (b) figuring out a way

to move a large file. According to Femia, an online dropbox service called “SendThisFile” had become a popular kludge for phoning home with newly shot video. TRMS’ use of Vimeo, however, allowed them to publish a video quickly after it was taken—in the example Conaway gives above, of uploading a quick take of a crowd awaiting the beginning of the live-audience show in Anchorage, she was able to make the video available even before the show began.⁷² Moreover, posting a Vimeo video simultaneously makes the uploaded file available for download, which means that at the same time a TRMS video goes live, it also becomes available for download. In other words, it is a solution not just for immediate publishing, but also for moving large files. And while the staff doesn’t hesitate to use Vimeo clips instead of the MSNBC.com player on the Maddow Blog, Femia will frequently enter TRMS clips that originated on Vimeo into MSNBC.com’s CMS anyway so that they will syndicate to the show’s mobile apps. Where desired, he can also toggle the CMS settings that would normally farm the video out to the rest of the Bing video network.

As we saw, Vimeo is also useful to the staff in that it changes, they hope, the expectations of viewers regarding what’s in a clip. If audiences associate the MSNBC.com player with professionally produced content, Vimeo signals more of a peer relationship that aligns well with the technical capacity, aesthetic purpose, and an aura of informality surrounding the FlipCam. In Conaway’s view one goal of posting such content is to break down the traditional one-way concept of broadcasting by accompanying professional television content with

a very friendly Web presence, which really is mostly what the blog, as a form, is designed to convey. It’s designed to look low-fi and inviting, as opposed to crisp and clean and

⁷² It’s worth noting that this level of instantaneity is only available to paying Vimeo users.

elevated. And, you know, it's designed to look kind of broken, a little bit. You know?

Kind of like there's some cracks in it and there's a light shining through.

This is an important aspect of the philosophy behind the Maddow Blog, an editorial strategy aimed at making content seem less like broadcast and more like a channel where someone is listening on the other end. In other words, the FlipCam in combination with Vimeo constitute a set of resources through which TRMS accomplishes a combination of provincial objectives that involve distribution, to be sure, but also elements of editorial strategy and community building. In the following chapter, I shall further discuss the relationships between editorial and distribution strategies.

A Possible Cable Site

To close out our discussion in this chapter, let's step for a final time back into the vantage point of MSNBC.com, while remembering that such a perspective is a partial fiction, given that it, too, is an organization made up of many system builders. As we've seen in this and the previous chapter, MSNBC.com over the years built toward an isometrically stable system predominantly aimed at repurposing and distributing original television content from MSNBC TV and NBC News for the Web. TRMS put pressure on this system by taking hold of the same resources and building toward an online presence optimized for original Web content (that has at times been repurposed for television). In a rigid, hierarchical universe of systems, we might expect the nail that sticks up to get hammered down. On paper, after all, MSNBC.com in many ways holds the reins to TRMS' Web presence. It owns the domain name, the blogging software, the database, and the video rights. But we've already established that we don't live in this sort of

universe. In fact, MSNBC.com wrote software for downloading television-quality video from FlipCams, so that shows like TRMS that used them could better prepare their content for air. They also directed Newsvine to include native support for Vimeo in the new post-authoring interface it was releasing on the M3 architecture. In the same way Maddow's large Twitter following was attractive to the Web venture, "if all of a sudden, an NBC News correspondent's Vimeo account was seeing a huge amount of video traffic, we would look at that as an opportunity," said MSNBC.com's director of multimedia Stokes Young.

In short, we've established that the local teleologies of overlapping systems can both dovetail and conflict. Moreover, the sorts of conflicting pressures that we've encountered in this chapter are a substantial part of how large media organizations evolve. From any vantage point, the illusion of stability in a system comes from a balance of conflicting pressures. Whether a system is stable or in flux depends in large part on the vantage point one chooses, and it's when this isometric balance is upset that change happens. Just as we saw how Sam Go's team, for example, quickly reframed TRMS' incursion on their resources as the recalcitrant bit of a new resource, rather than looking at it as an unequivocal obstacle, MSNBC.com ultimately saw, in the system TRMS had built, a unique and important opportunity—one which again grew out of a larger tension. As we've seen, the cable news channel's online presence in some ways lives at the margins of MSNBC.com's general-news experience—currently it takes the form of show-centered microsites, that rarely surface on the MSNBC.com front page beyond a few navigational links. For a long time, this sort of peripheral presence was acceptable, but as online distribution and the conversation economy grew in influence, expectations changed and there was new pressure to raise the profile of the cable content and personalities. Randy Stearns,

MSNBC.com's East Coast deputy editor was one employee who found himself at the middle of this tension when I spoke with him in 2010. "Cable has been a source of endless frustration and disappointment for me," he said.

Early on, when they [MSNBC TV] were still in Secaucus they kind of ran things online themselves, but at times didn't. We [MSNBC.com] didn't really have a very active role at that time. They eventually threw it back to us to manage and we worked on how to make something interesting gel around that content. But the trouble was there was little or no direct engagement from the cable people online. There was very little revenue, and there wasn't a lot of traffic. And so it was hard to make a good case for moving them closer to the center of the news experience—it's all about having content that users want to consume. As MSNBC cable began to find its "voice" in 2007, it became more apparent to some of us that there was a lot more online potential with cable. And so when they started to sort of hit their stride in terms of format and programming, and Phil Griffin had taken over [as MSNBC TV president],...we began to advocate for doing more with cable. It really bothered me that the front of our site, our news team would not touch cable primetime in particular, because it had such a political bias, even though it was often incredibly strong, and even though, particularly in 2007, 2008, what [Keith] Olbermann was saying every night actually set the agenda for the next twelve to twenty-four hours in some ways, in terms of what people were talking about. ... [A]nd my argument was really pretty basic. It was like, "Look, he's our guy. He's doing this stuff. We have it. Nobody else has it. People want it. We should make it easy for people to get it. We don't have to call it 'news.' But we shouldn't let other sites take advantage of it

while we marginalize it. We would have to qualify it as opinion, commentary, whatever; of course. But we really need to give these guys more of a presence. We really need to encourage them and do more with it.” But for reasons that I understand (I just disagree with) my colleagues on the news team felt that we needed to maintain editorial distance from that content. ... From where I sit, in this building with these people at NBC, and looking at it from the vantage of contemporary media consumers, it’s shortsighted to think that users have trouble distinguishing between content types and points of view. It doesn’t take into account the way people consume information today. It’s bad business. It’s not fair to our colleagues at cable. I know them, they work incredibly hard, they’re incredibly lean, understaffed. And, you know, they deserve to have a home online. And we should be the ones doing it. So we’ve gone through a series of discussions about how to do this. And, as you’ve probably picked up, there’s a certain amount of consternation here about how that’s going to play out.

And in fact, around that time the cable channel appeared to have begun its own heterogeneous engineering project aimed at expanding and tightening control over its Web presence. According to some reports, as part of this effort, MSNBC TV even threatened to buy its own Website, independent of MSNBC.com (Stelter, 2010b). Whether or not acquiring a liberal commentary site like the Huffington Post was actually in the cards, this sort of outspoken resistance put new pressure on the the Web venture to provide a fresh solution to multiple, and potentially conflicting, agendas. Individual shows beyond TRMS have also taken measures to gain more control over their Web footprints. When MSNBC’s newest primetime anchor, Lawrence O’Donnell launched his show, *The Last Word*, his staff included a Web producer on NBC

Universal's payroll in the same mould as Laura Conaway. And a number of shows, including The Last Word and Ed Schultz's The Ed Show, now have section fronts that default to Newsvine blogs built around the same Mike Blog template Newsvine originally designed for TRMS, as opposed to the traditional video player.⁷³

Once again, however, MSNBC.com has found a way to translate the demands of a seemingly conflicting system into their own terms. You'll recall that MSNBC.com's expansion strategy has been to leverage different segments of the online market for news. And as it turns out, while it owns a large mainstream news site, a news-themed social network, a breaking news site, and a lifestyle Website in the form of Today.com, it does not yet own a site dedicated to opinion and commentary. And under this market strategy that MSNBC.com has developed since its ownership split from MSNBC TV in 2007, building an online answer to the cable channel's "op-ed television" brand is an ideal way to corner another portion of the news market.

Tillinghast explained,

In the case of cable, what we've seen is that the whole commentary segment of news has grown up over the last five years or so, particularly with the Huffington Post. So, as general news becomes increasingly commoditized, you need a way to differentiate yourself by doing some sort of a riff on the news. We're not playing in that market at all.

So doing something with cable allows us to do that.

By late 2010, the cable channel, then, appeared likely to receive its own Website. One issue here, as you'll recall, is that right now different cable shows have drastically different outputs online. It would be relatively simple, from an editorial perspective, to build a Website around a

⁷³ NBC News more broadly has also taken measures to exert greater control over its Web presence, creating a new "director of social media" position in 2010 and hiring former NPR chief and NYTimes.com head Vivian Schiller into another new position in 2011, "chief digital officer."

parade of shows that all produced nearly a hundred original articles a week, as TRMS does. In practice, some shows rarely post to their blogs and others have no blogs at all. As part of this transformation, MSNBC.com has requested that every MSNBC TV program hire a Web producer, or as Go put it, “one of the intentions is to have...a Laura for every cable show.” This, of course, leaves some large open questions. As we saw, part of Conaway’s success as a member of the Maddow team came from the extraordinary level of trust that had developed between her and the TRMS staff—a situated quality that would be difficult to carry over to other programs simply by cloning the staff structure. Moreover, some of the sources I talked to found it unclear whether the Maddow Show, after working long and hard to establish an online presence that felt independent of MSNBC.com would quickly hop on board with the idea of folding their site into a new cable destination, where the show would again be one content provider among many.

In either case, at the time I visited, Tillinghast and others indicated that an editorially independent cable site was quite possibly on the way. How one defines this development is perhaps the most striking lesson in the relative nature of systems thus far. Viewed from the vantage point of the executives and employees at MSNBC TV who voiced dissatisfaction with their representation online, even threatening to buy an alternative Website, the move toward the cable site might be seen as a victory, wherein MSNBC.com was forced to build them a more robust Web presence and relinquish a great deal of editorial control to the TV side.

Meanwhile, from the vantage point of the MSNBC Digital Network, the same site, once developed, would turn MSNBC TV into one more content provider in its collection, with which to leverage an as yet under-utilized segment of the market. Meanwhile the proposed changes to the cable channel’s staffing structure will guarantee the Web venture more content than ever

before. I've put this contrast in stark terms to make a point—as Stokes Young pointed out, there is caution at MSNBC.com not to view NBC News content, including that from cable, as a simple commodity. Likewise, those on the NBC Universal side of the payroll are aware of the traffic advantage given them online by their inclusion in the Blue Site and the MSN network. And it's easy to see how the outcome of the conflict I've described—in which both parties believe they've won—could also be viewed as a mutually agreeable solution. The larger point to be made, however, is that the cable site itself is a highly particular distribution solution that serves as an actor in multiple overlapping systems.

This observation is further underscored by the fact that, at the time of my fieldwork, the Newsvine development team and its platform were one of the leading contenders within MSNBC.com for the construction of the new site. “One of their functions is to power all of the community features on our site,” said Tillinghast. “...They have a certain technology resident within the Newsvine platform—especially in terms of having user participation functionality. So when we think about using them for the cable site, a lot of the features the cable site needs are driven by that functionality. So it may make sense just to build the whole site on Newsvine.”

Final Thoughts

In this chapter, we've traced out the progression of Newsvine from an independent startup to an “arms-length community” site owned by MSNBC.com to one of the primary content management systems helping to power the MSNBC Digital Network and MSNBC TV and a potential platform for the construction of a new cable site. We also saw how The Rachel Maddow Show went from having a templated Web presence on MSNBC.com to faking blogware

and using third-party Web tools to launching a blog robust enough to serve as a standalone site and hub for the show's social media efforts to serving as a new template for the Web efforts of other MSNBC TV shows and the exemplar around which the new cable site would be built.

Looked at from the outside, these are major transformations in the digital distribution strategy for MSNBC.com and MSNBC TV. What we've come to understand, however, is that from an analytical standpoint it makes less sense to look at these shifts as the product of a monolithic organization than to examine them as changes wrought by numerous system architects with provincial needs and norms, building toward local teleologies that employ overlapping sets of resources.

This is the insight identified by SCOT scholars when they point to the numerous stakeholders who impact the design of artifacts and the social practices surrounding them. The aspects of a particular actor that make it a resource for one system builder frequently make it recalcitrant for another. These can be seemingly small—the automated profanity filter that replaces written cursing with grawlix is a boon to Newsvine moderators, but an annoyance to authors at MSNBC when they find their articles have been surreptitiously edited by the software. They can also be substantially larger, as when the microsite template that worked well for cable shows with limited initial interest in their Web footprint proved confining for the TRMS team that wanted to capitalize on it, or when the norms of community policing and editing developed for Newsvine's independent citizen-journalism community began to break down when applied to a mainstream media site. These are also examples of the pressure that's applied to local teleologies when a new actor is lashed into an isometrically stable system. Selling to MSNBC.com shored up Newsvine's finances, but put dramatic pressure on the previously stable

social components of its platform. Acquiring Maddow as a content provider gave the Blue Site access to a large and highly engaged Internet audience, but put pressure on its previously streamlined system for repurposing television content.

These observations are not dissimilar from those in the previous chapter concerning how MSNBC.com engineered a volta for online video. From whatever vantage point we choose, we see how various actors simultaneously provide resources and exert pressures that impact the provincial distribution strategy and its implementation. What's different is that we've come to understand how MSNBC.com, like any large media organization, is not a monolith. It is not a single actor, but a construct—a line drawn around the activity of numerous system builders whose goals are sometimes in concert, but at other times in conflict. In one of my interviews with him, Will Femia eloquently described the provincial nature of work at MSNBC, highlighting the numerous local teleologies in play at any given time:

The marketing team might have an idea—"Lean Forward," or whatever they want to do. Dot-com might have its own idea, "Fuller Spectrum of News," or whatever that is. PR might be pitching one way or another. ... But, ultimately because I'm working with the stuff that the [Maddow] show is producing, to me it feels more tangible and more important than the bigger-picture brand pushes, the personality stuff. I'm explaining why I don't feel a real conflict with them. Because I feel like, if what they're doing serves the show, and can work with the content that I'm handling, then great. And if not, then I don't feel any guilt not playing with them on whatever it is they're trying to get done. Do you see what I'm saying? It sounds kind of dicky, but it comes also from the awareness that every team has its own individual politics and goals. So I know that the PR lady has

to show this many media mentions, or she's trying to impress this particular boss, or whatever. Those goals don't necessarily align with my goals or the show's goals. So being aware of that frees me from thinking that I have to use everything they're doing, or I have to participate in whatever deal they just made.

This is not a description of rigid organizational hierarchy, but of heterogeneous engineering, of the lashing together of recalcitrant resources, and the trickiness inherent in navigating an environment full of distinct, but overlapping local teleologies. In other words, it is not unlike the universe of system builders outside the construct of the organizational boundary.

To call into focus the constructed nature of organizational boundaries is not to suggest they have no meaning, but rather an invitation to consider the work that they do. As Chia (1995) notes, in an environment full of flattening hierarchies and project-based economies, the role of contemporary sociologists is, in part, to rediscover what it means to have an "organization" in the first place. Why draw this line? It's tempting to argue there are objective reasons for doing so. We've already identified how media organizations tend to contain *overlapping* systems and resources. Newsvine's system and TRMS' intersect in crucial ways. But, stepping outside the organizational boundary, consider the number of individuals, groups, and organizations that have a stake in the LAMP solution stack, a publishing platform like WordPress, a social network like Twitter, or a video site like Vimeo or YouTube. These are all artifacts, platforms, and social environments that are both themselves the product of local teleologies, and crucially enrolled in many systems simultaneously, bearing the impressions of numerous heterogeneous engineers.

Another reason why it might make sense to think of organizations as singular, despite their complexity, is that the laws of ownership and contract require them to be so, at least in the

eyes of the law. After all, when it comes to a company like General Electric, which until recently owned NBC Universal, as Noam (2009) puts it, “What are the synergies of film and TV production with jet engines, nuclear reactors, refrigerators, and financial services” (pp. 437-438)? Ownership and contracts are clearly the connecting thread between all these things—but this puts us right back at the question of what work organizational boundaries do. And one answer is that they are framing devices, defining what is internal to the enterprise and what is an externality to those seeking to make money off the arrangement (Callon, 1998). Put another way, an organizational boundary is an actor in someone’s system, a resource developed to do work—in this case financial work.

But as we’ve seen, an actor, once on the scene, rarely goes un-enrolled by other system builders. An organization, once it exists becomes not just a means for its owners to make money or for its employees to draw a paycheck. It also does cultural work as the starting point for a brand, an identity—“progressive,” “innovative,” “environmentally friendly,” etc.—that can be used to speak to particular audiences and consumers. This can be put into financial terms as well —“leveraging different areas of the market”—but as we’ll see in the following chapter it has broader implications, too. Here, too, however, a brand is not merely a resource for those inside the organizational boundary. It also serves as a resource for those who would criticize the organization as well. Recall Femia’s observation that, when it came time to moderate comments,

NBC News means different things to different people, but it means something. And MSNBC means something. And Microsoft means something. And even within that, our sub-communities mean things beyond what we can control. Like it just doesn’t matter

[what you do]. You're going to get a Fox News guy in there somewhere. Or you're gonna get an anti-corporate guy in there. ... To some extent there's nothing you can do. While, as Couldry (2008) would point out, there are great asymmetries of resources and power between the editor at MSNBC.com, with access to a host of moderation tools on the one hand, and the commenter leaving flames across the site on the other, the point here is that it doesn't take an "insider" to wield a brand as a resource.

And we need look no further than the divergent editorial strategies of MSNBC TV and MSNBC.com to see that corporate boundaries and brands can prove as recalcitrant for insiders as for anyone else. But they also serve as resources for controlling public access to the negotiated nature of the heterogeneous solutions engineered by actors inside organizational boundaries. As an example, from the outside, the stories I've told in this chapter might look something like this:

MSNBC.com was one of the first mainstream media organizations to invest heavily in social networking, acquiring Newsvine in 2007. In 2010, further recognizing the commercial importance of the social Web, MSNBC.com fully integrated Newsvine's community features into its primary domain, demonstrating its commitment to the enterprise by pilot-testing its new community blogging software with one of MSNBC TV's flagship primetime programs and subsequently releasing the platform across the whole of the Blue Site.

This narrative, while not untrue, is also not terribly nuanced. As we saw, TRMS applied substantial resources to obtaining early access to the new blogging platform. And while Newsvine certainly became a central system within MSNBC.com, its integration into the Blue Site caused a good deal of turbulence for the former startup and the original community it had

started. Finally, as we'll see in the following chapter, from the vantage point of some system builders at MSNBC.com, Newsvine's new blogging platform proved recalcitrant to varying degrees.

Identifying organizational boundaries and their associated brands as resources enrolled in multiple systems demonstrates how important they are as actor categories. At the same time, from an analytical perspective we would do well to steer clear of employing them as *a priori* analytical categories. It turns out that they are a couple of the useful tools to be grasped in a universe of system builders binding together overlapping heterogeneous resources. Online distribution paths are the result of the pressures exerted by all of these actors, and institutional affiliation matters only inasmuch as it serves as one more resource and/or a barrier in the shaping of these systems. Finally, having thus deconstructed the monolithic view of media organizations with which this chapter began, and dispensed with the corresponding division of the world into internal and external forces, we've reached bedrock: an unbroken fabric of overlapping, heterogeneous systems across which content is distributed. We're now prepared to think more directly about its influence on our information environment.

chapter four // mass reach // without mass media

In order to lay out the task of this chapter, it will be useful to briefly recap what we've accomplished so far. In chapter two we looked at some of the challenges large television news organizations face as they try to embrace online distribution of their content. Whereas the extant system of distribution involving broadcast affiliates and cable providers has until recently been isometrically stable, to capitalize on online distribution media providers have had to learn how to encourage their content to propagate in desirable ways in an information environment that's constantly changing and largely outside their control. Creating reliable distribution channels—voluntas—for content online has involved the application of tremendous feats of heterogeneous engineering for MSNBC TV and MSNBC.com and resulted in distribution paths that take advantage of all the sundry, and often recalcitrant, resources, from video advertising networks to Twitter users, that these system builders could lash together, while threading a needle between the limitations and pressures imposed by them.

In chapter three, we saw that MSNBC is not a single, monolithic system builder or even two (TV and online), but rather an assemblage of myriad heterogeneous engineers all pursuing their own provincial needs and interests. This is not to say that there is no hierarchy within large media organizations, nor that organizational boundaries are meaningless. Rather, I have asserted that, from an analytical perspective, it is most useful to consider these things as actor categories, resources in themselves for heterogeneous engineers inside and outside the construct of the organization to work with, and at times around. When we assume an analytical lens that defies

organizational boundaries in this way, we're left with an unbroken universe of changing, overlapping systems and system builders working to enroll a common pool of resources—including one another—into a network that suits their provincial distribution aims.

The result is, I hope, a more sophisticated and a generalizable framework for understanding how online distribution systems are built. But we've also come to realize that the results of this process are highly situated. Insofar as the universe of systems is a relative, overlapping one, and system building in an online environment is about “presiding over change,” any distribution system we describe will necessarily be specific to a vantage point and a particular moment in time. In this chapter, while still focusing on television news and drawing from the cases I have introduced, I will attempt to develop some more general principles and observations concerning online distribution systems. To paraphrase Tim Jordan (personal communication), we can examine online artifacts and find out what socio-technical situations they might summarize or conceal or manage, but do they do this management in a particular way? To answer this question, we must first develop a more sophisticated language for discussing the manner in which news and information moves online. The notion of the “conversation economy” has served us well up to this point, but it is so far more a buzzword than an analytical construct. How might we expand it in scholarly terms?

Systems of Knowledge

Gaye Tuchman's 1978 newsroom ethnography, *Making News* has become a landmark text in journalism studies and media sociology more generally. One of its great contributions is to re-envision the study of journalism as an exercise in the sociology of knowledge. She flags

journalism as just one among numerous “organizationally and professionally produced” systems of knowledge, including science and sociology, as well as creative industries like film production and the television business (Tuchman, 1978, p. 217). Moreover, since Tuchman’s initial writing, the number of creative industries has exploded, with many traditional sectors of the economy refashioning themselves as producers of cultural products and intellectual property (Deuze, 2007). Correspondingly, authors like Knorr Cetina (1997, 1999, 2001) argue that we are gradually becoming a knowledge society, replete with an expanding number of *epistemic cultures* and intersecting systems of knowledge that are no longer bounded by organizational cultures, but have become a part of everyday life. Knorr Cetina (1997) takes this “discharge of knowledge relations into society” as one of the new key concerns for contemporary social theory (p. 8).

In this vein, many scholars point out that a great deal of contemporary creative work online, from open source software to blogs to fan fiction to encyclopedias, is produced, not by professionals or creative industries, but through commons-based peer production undertaken by loosely confederated groups of individuals collaborating for free (Lessig, 2004; von Hippel, 2005; Benkler, 2006; Bruns, 2008). Bruns refers to the networks of collaborators that grow up around these projects as “produsage communities,” and they bear a great deal of resemblance to what Knorr Cetina (1997; 2001) deems epistemic cultures, or groups whose sociality is organized around common systems of knowledge, which in turn are generally grounded in common objects of inquiry or production. Moreover, while some peer production may require a great deal of cooperation aimed at building a common artifact, such as a software release or an encyclopedia article, many communally produced resources result from far less coordinated and

task oriented user activity, such as when users individually tag photos on Flickr resulting in a searchable image archive, or improve search results when their linking activity is aggregated by a search engine (Shirky, 2008; Bruns, 2008). In Bruns' (2008) interpretation, an online community can even be its own object of communal production, with users evaluating and assigning merit based on one another's contributions to the ongoing discussion, irrespective of any intent to create any artifact beyond the forum itself.

In light of all these observations, it's tempting to consider different online communities⁷⁴ as epistemic cultures in Knorr Cetina's (1997, 2001) sense, each constructing and/or examining its own common objects, whether such objects include evolving pieces of peer-produced software or the evolving sense of "community" itself. In some ways, this is precisely what I intend to do, however, there are some salient differences to be considered, before we can glean this value from the concept.

On Epistemic Cultures

To the value to be taken from the notion of epistemic cultures, and which parts of the concept we might have to leave behind in our discussion, I'll take a moment to better explain the construct. The phrase belongs to Knorr Cetina (1999) and to her comparative study of two scientific fields—high-energy physics and molecular biology. Knorr Cetina's study revolves not around the social construction of knowledge itself, but in her words, "the construction of the machineries of knowledge construction" (p. 3): the social and technical arrangements, arising

⁷⁴ I am aware of the extant debate over the validity of the term "online community" as a scholarly construct. Some scholars, like Wellman and Gulia (1999), have argued that the term at least makes sense, as online communities frequently possess many of the properties of offline communities, such as social capital and reciprocity. At the same time, other researchers (for example, Haythornthwaite, 2007) have suggested that the notion of "communities" be abandoned in favor of that of "social networks," the argument being that social networks are a more precise, quantifiable, and therefore operationalizable construct. I do not wish to enter into this fray at the moment, but will clarify my stance on the issue later in the paper.

from “affinity, necessity, and historical coincidence” (p. 1) that surround different communities of investigators and give rise to scientific knowledge. In short, she coins the term in an effort to describe how different scientific disciplines are not simply pursuing different lines of inquiry, but constitute different *cultures* of inquiry, whose objects of study become the focus of an “object-centered sociality,” giving rise to distinct practices, social structures, and shared ontologies, all of which in turn discursively shape the knowledge they produce. Moreover, as I say above, Knorr Cetina (1997, 2001) ultimately proposes that, as we become a knowledge society, we must ultimately consider the notion of epistemic cultures as one that extends beyond the sciences to other institutions, as well as informal systems of knowledge production and ultimately into our everyday experiences.

And in fact, returning the discussion to journalism, Gaye Tuchman’s (1978) explication of the *news frame* might well in principle be considered an example of an epistemic culture in Knorr Cetina’s (1999, 2001) sense. Framing, of course, is a word that gets thrown around quite frequently in many contexts (Scheufele, 2000), so it’s worth noting that Tuchman’s (1978) use of the term is rather distinctive. She describes how, in an attempt to make economical use of limited resources, news organizations deploy their reporting staff strategically, both geographically and temporally. She calls this pattern of resource deployment the *news net* and describes how it generates selection effects, systematically capturing particular types of events and issues, while seldom or never netting others. On the one hand, Tuchman’s metaphor of the news net is intended to evoke the image of a wide-meshed fishing net lifting only items of a certain size and shape out of the water. But the woven strands of Tuchman’s news net are also a metaphor for another kind of net—a *network* extending through time and space, along which

information travels from far-flung bureaus and distant wire reporters back to the newsroom itself. Information on events that makes it back to the newsroom is then *typified*—assigned to rough categories based on journalists’ and editors’ prior experience covering similar events. These categories—“soft news,” “spot news,” and so on—subsequently allow editors to plan their coverage, which in turn leads to a refining of the organization’s strategic distribution of resources, further structuring the news net. A final (for our present purposes) concept introduced by Tuchman is that of the *web of facticity*—the collection of mutually supporting facts and sources assembled by reporters and written into a story. Taken individually, any fact or source in a news story might appear suspect, but together they all serve to back one another up, ultimately giving off the appearance of a credible article.⁷⁵ Just what constitutes an adequate web of facticity is a matter that is reflected in individual stories, but larger than any particular article—the sorts of sources that are credible, what counts as a fact, and so on, all reflect and are reflected in the structure of the news net and the professional culture of journalism that surrounds it.

These elements—the news net, typification, and the web of facticity—are all part of Tuchman’s (1978) news frame. Her use of “framing,” inspired by Goffman (1974), is not about the framing of individual news stories, but about the larger “machinery of knowledge construction” in Knorr Cetina’s (1999) sense—the patterned arrangement of resources that results in journalists’ particular and selective conception of the world. Tuchman’s (1978) injunction that we examine the frames employed by other creators of knowledge is in a sense, then, carried forward in Knorr Cetina’s concept of the the epistemic culture.

⁷⁵ The general observation that authors are strategic in their use of sources and the juxtaposition of facts to bolster the credibility or their work risks being a lesson in the obvious, but nuanced accounts of how this is done are an essential part of accounts that attempt to bring out the constructed nature of factual writings. Nowhere is this better illustrated than in science studies—for example, see Collins, 1981; Latour, 1986; and Hilgartner, 2000.

The immense value of Tuchman's and Knorr Cetina's work is that it illustrates how and why we should think of knowledge as a product of heterogeneous engineering. A news story or a scientific paper are the result of heterogeneous machineries of knowledge production—the lashing together of human resources, material objects, economic instruments, and previously ratified texts (Latour & Woolgar, 1986; Latour, 1990; Law, 1992). This is also the insight of media scholars like Anderson (2009) and others visited in the previous chapter, who've looked at cultural production in ANT terms, as well as what scholars like Geiger (2011) and Slattery (2009) refer to when they examine Wikipedia articles as the products of a socio-technical system. All texts, including news stories, are heterogeneously engineered artifacts. And while there are numerous implications for media production, many of which are explored by the aforementioned scholars, in the context of the present project I will concern myself with what this means for media distribution. Where and how is the content of media production a resource for heterogeneous distribution? If we understand them as components of the same system, how should we then understand the relationship between them?

Some Important Caveats

While Knorr Cetina has aptly pointed out that knowledge relations permeate our society, it's important to recall that much of her framework of epistemic cultures was developed in connection with her studies of two major professional groups—high energy physicists and molecular biologists. Similarly, Tuchman aimed to describe news work on a broad scale. Both scholars aimed to examine achievements of professional socialization on an impressive scale. Attempting to describe the sorts of loosely confederated produsage communities described by Bruns (2008), for instance, in terms of professional norms and boundaries would do violence to

the object of study. Likewise, in the previous chapter I attempted to demonstrate how lenses that foreground the cross-cutting power of professions are likely to run roughshod over the provincial and at times highly influential efforts and objectives of distinct system builders working within the media environment. These are good enough reasons not to indiscriminately apply the term “epistemic culture” to any group of system builders pursuing a common local teleology. But there is another, which is that we’ve already explored and developed a language of heterogeneous engineering that actively eschews hard distinctions between the technological and the social. To champion the epistemic as belonging to a discreet analytical framework would be to reintroduce this distinction and undo many of the insights we’ve gleaned thus far. For these reasons, I will tend to speak of “epistemic concerns” in the context of heterogeneous systems, much as I have previously spoken of economic, technological, or legal ones, but I shall refrain from asserting epistemic cultures as a distinct category.

Boundary Objects and Trading Zones

What remains essential to take away from Tuchman’s and Knorr Cetina’s work is that media texts are heterogenous products. In light of this, we should further understand them as being produced by a relativistic universe of system builders, diverse in their composition, and in their objectives—in other words, pursuing distinct local teleologies. This has special import online, where Bruns (2008) and numerous other scholars have noted the extent to which the production and consumption of texts are intimately linked. The shared links and embeddable media objects that drive so much traffic in the conversation economy are propagated by users who only share them when doing so fits their personal or group objectives. As Today.com

director, Jennifer Brown put it, it's important that the links the site feeds out to social networks be either "something you want to discuss and comment on, or something you want to share because it will make you look cool among your friends." As Jenkins (quoted in Usher, 2010) describes it,

There is a constant tension at this moment of media transition between wanting to lock down content and meter access on the one hand (a model based on "stickiness") and wanting to empower consumers to help spread the word (a model based on "spreadability.") We can see that tension in terms of the desire to gate access to news content and the mechanisms of spreading which characterize Twitter and blogs.

Journalists have long embraced a central idea...that content represents a resource which community use to talk amongst themselves. Journalists need to know how they fit into those circuits.

As we saw in chapter two, the need to "fit into the circuits" of many different provincial systems of knowledge can have significant implications for distribution. The success, for instance, of MSNBC.com's embeddable video player was predicated on its ability to work in many contexts—the ability it gave users to rapidly locate the clip they wanted, to precisely cut out only the part that fit their provincial needs, and to embed it on (nearly) any site or service they chose. An enormous amount of heterogeneous engineering went into creating this flexibility. Several scholars have fruitfully addressed this notion of knowledge objects and other artifacts that cut across contexts and simultaneously serve the needs of multiple systems. I will visit their ideas here, before proceeding to further discussion of how different groups within MSNBC.com have approached the challenge of distributing texts that work across multiple systems and contexts.

Boundary Objects

Star and Griesemer (1989) recognized that knowledge-building endeavors often require collaboration from diverse groups with only partially aligned interests and worldviews. In exploring this state of affairs, the authors took as their example one of California's early natural history museums and the means by which it went about building out its collection of data and specimens—the people behind the museum were, in our terms, system builders. Fitting with our notion of relative and overlapping systems, each of the groups of stakeholders who participated—some centrally, others peripherally—in the museum's endeavors had very different interests in mind. The donor who funded the University of California's Museum of Vertebrate Zoology sought, through her charity and personal hunting prowess, to preserve specimens of vanishing wildlife, which required the widespread acquisition of relatively intact furry and feathered corpses. The museum director sought to make a name for himself in the ecology research community, which necessitated not only good specimens but accurately collected data about each find, sufficient for aggregation, comparison, and theory building. The university administration cared little about wildlife preservation or assembling a massive collection of stuffed animals, *per se*, but sought to legitimate the young University of California on the national stage, while making it a local cultural center. The amateur naturalists who occasionally brought in specimens wanted to aid the museum's scientific pursuits, but were also eager to receive official recognition for their hobbyist naturalism. Trappers could also be persuaded to capture and part with choice specimens, but were generally only interested in cash, or other exchanges that benefitted them directly, such as the receipt of other pelts in exchange for those they contributed or information on promising hunting territories. The museum's collection, in other words, existed at the center

of a flurry of heterogeneous engineering, not unlike the other systems we've encountered in this manuscript.

Amid this complex mesh of divergent interests were limited areas of alignment and overlap, made possible by the existence—and at times the creation—of *boundary objects* (Star & Griesemer, 1989). Boundary objects may be symbolic or physical objects—like cash, points on a map, or otter pelts—which often mean different things or are valued for different reasons within the distinctive cultures of various stakeholders. But, importantly, they are identifiable to everyone at the table, and thus become a means for translating the interests of one group into the terms of another. In the case of the museum, each party's use of boundary objects to partially align and further their individual interests with those of others gave rise to a unique, heterogeneous system for enlisting, distributing, and managing one another's labor and capital in a way that ultimately not only allowed for the museum's continued functioning, but distinctly shaped the knowledge produced by it. Boundary objects are thus an important construct. They demonstrate how distinct cultures and system builders may coordinate with one another in a way that furthers their individual interests, without foundering on the rocks of their ontological differences.

Trading Zones

Like Star and Griesemer (1989), Galison (1997) takes up the problem of how it is that different cultures can at once be heavily interdependent—such as is the case with theoretical and experimental physicists—while remaining largely autonomous and distinctive. In answer to the problem, he draws from anthropological notions of trade, noting that it is possible for different cultures to engage in commerce while maintaining distinct, and even opposing worldviews.

Rather than boundary objects, he proposes that autonomous subcultures develop languages of trade, or *pidgins*, through which to interact with one another. Many of his key examples come from the collaboration of American physicists and engineers on defense projects during World War II. To collaborate on the bleeding edge technology of radar, for instance, theorist Julian Schwinger and his engineering contemporaries developed a pidgin that served to reduce high theory to the bare essentials needed by engineers and vice versa. The resulting calculations and schematics were neither physical theory nor engineering schematics in the classical sense of either. Nor were electrical engineers and theoretical physicists becoming experts in one another's domains, which were not even terribly consistent with one another. Rather, the two subcultures had developed a pidgin that allowed both to further knowledge within their own domain without stepping outside of their unique systems of knowledge.

Galison (1997), through his examples, portrays pidgins as being born out of pragmatic necessity, though certainly he leaves open the possibility that they may at times be forged of convenience. But whether they arise in the frenetic heat of the moment or for simpler reasons, pidgins can often be unstable, resulting from temporary alliances that disintegrate once everyone's needs are met. They may also develop into sophisticated *creoles*—rich systems of meaning capable of sustaining their own epistemic cultures.

Trading zones are the areas of partial alignment in intersecting systems of knowledge that spawn and sustain pidgins and creoles. These may be concepts of mutual interest or physical objects (e.g., various radar apparatus). They may also be physical spaces, such as shared laboratories. Galison (1997) points to the initial architecture of postwar labs like Brookhaven, which simultaneously underscored the separation between the professional identities of different

groups of physicists while foregrounding opportunities for coordination between them. As we shall see shortly, such decisions about architecture are equally relevant in the design of new media spaces. For now, it's enough to underscore that for Galison (1997), as for Star and Griesemer (1989), the manner in which different epistemic cultures coordinate—whether out of necessity or historical accident—around their partially aligned interests allows for the generative coexistence of different systems of knowledge, and has the potential to impress itself upon the local teleologies of each.

Distribution Trends at MSNBC.com

Having laid some theoretical groundwork for discussion, I'll now move on to a discussion of two major trends at MSNBC.com aimed at dealing with the epistemic challenges of moving content in the conversation economy, which we now understand to involve the selective uptake and movement of material by different system builders, based on whether or not they regard it as a resource within their local teleology, which may involve anything from the maintenance of friendships (perpetuating an inside joke, say, by sharing a link that's only funny in a very local context) to maintenance of a topical blog to editing a Wikipedia article to building a social network following.⁷⁶ Two major trends have emerged among system builders at MSNBC.com for dealing with this challenge—the proliferation of brands and increased flexibility of architectures—which I will treat here in turn.

⁷⁶ Until now, when using the terms “system builder” and “heterogeneous engineer,” I have generally been referring to groups working together to unfold a shared local teleology. So it may seem something of a shift to use the term in referring to individuals or loosely confederated groups who forward, share, and blog about media products as heterogeneous engineers. But this fits quite well with the relative nature we've attributed to systems, in which the identity of the builder and the shape of the system are traced out differently depending on the chosen vantage point. As Law (1987) states, “we are all heterogeneous engineers, combining as we do, disparate elements into the ‘going concern’ of our daily lives” (p. 133).

Proliferating Brands

Amit Nizan, MSNBC.com's director of brand marketing defined a brand in this way:

A brand is really a personality that's attached to a product. So, it's not just the actual output that is important to people. It's what it's connected to, what it feels like. Those sort of intangible qualities that make something unique. I mean we're all people, right? So each of us is a brand also. We have our unique personalities. The way that we talk, the way that we dress, everything we do contributes to how we are all different as people. So the same thing applies to brands. And right now, marketing is very top of mind for our company. As you know, we are in a really great position of having a lot of wonderful news properties to talk about, and that are part of our company. Each of these brands builds into kind of a mother brand. Speaking of the network sites, Bravo is, I think, a good example of a place that's built its own franchises that lead into the mother brand. Project Runway, [was] original programming to Bravo. And the Real Housewives, and all the kind of programming that they do, are their own distinct personalities. But they're all very closely associated to the Bravo brand. And that makes the Bravo brand even stronger. So their whole "Watch What Happens" [campaign] really ties in, because that's what they're showing in each of their products or brands.

As we saw in chapter two, brands have proliferated at MSNBC.com as the company has expanded itself into the MSNBC Digital Network. The frequently expressed goal espoused in press releases, as well as my interviews with MSNBC.com executives, was to use different brands—alter egos of a sort, in the manner described by Nizan—to extend the company's reach into as many online contexts as possible. Tillinghast recounted,

We want to have multiple brands that are attracting different segments of the news market. So, we don't view the news market as a one-size-fits-all. We're trying to tailor our products to fit the different tastes of different demographics. And by building sites that align with the show brands as well as ones that don't have shows, we're able to do that.

Since 2007, when the company made its first acquisition in the form of Newsvine, to target engaged news readers it dubbed "news explorers," it has also pursued the local news market through the acquisition of hyperlocal news company, EveryBlock, launched an internal startup called Breaking News targeted at social media users looking for the latest headlines, and spun off the Web presence it managed for NBC News' Today Show into a new site, Today.com, aimed at producing life and style content targeted at women ages 25 to 34. Within many of these "master brands" are "sub brands" aimed at leveraging even more niche audiences. For example, the Today brand online has been spun off over the last year into multiple columns, blogs, and sub-sites aimed at different groups, including Today Moms for mothers; The Look for fashionistas; The Clicker for "TV junkies;" Life, Inc for frugal living and budgeting tips; Scoop for celebrity gossip,⁷⁷ and numerous others. To give an idea of the level of specificity with which brands are being deployed, the Today Food subsite, which features recipes, even has its own spinoff, Bites that showcases culinary trends targeted at foodies who don't necessarily enjoy cooking.

Similarly, the Blue Site, MSNBC.com's flagship, has also been rapidly adding sub brands. To give just one example, the site launched a new tech blog, Technolog, last year that was quickly spun off into two additional blogs, including In-Game, which focuses on gaming

⁷⁷ The Scoop column was actually folded into Today.com from its previous home on the Blue Site.

culture, and later Gadgetbox for hardware news and reviews. Many of MSNBC.com's technology writers also contribute to Digital Life, Today.com's life-and-style themed tech blog.

The language of branding was also pervasive in the dot-com office in New York, prevalent not just among individuals who worked on the Web presence for television, but also other Blue Site editorial staff. Shows, blogs, anchors, columnists, sites, and television networks were all discussed in terms of their brand by MSNBC.com staff. Moreover, not all of this brand-speak originated from managerial circles carving up the news market. The decision to launch many of the themed blogs, for instance, originated within editorial circles, and a number of columnists with whom I spoke, for instance, discussed their columns, or even themselves, as being personal brands. At the same time, talk of branding occurred comparatively rarely among the television staff. Femia opined that the comparative ubiquity of this language among online editorial staff had a good deal to do with the far greater extent to which dot-com workers were responsible for the distribution of content:

It literally is a difference in jobs. The segment that you're making—especially for the Maddow Show—they'll say outright, "We're doing this story. It's not going to rate, but I want to do this story." And they're doing it. And then as the producer your job is to produce that segment, not pitch that segment, not market it somewhere, not write the cleverest headline you can so that it'll get more clicks, not send it to Huffington Post. The stuff that we do online has a *strong* marketing component that requires thinking about—even if you're not thinking about traffic, and even if you're not thinking about your brand, by virtue of having to pitch stories and figure out their placement and, you

know, watching your audience's reaction to what you're putting up, you can't avoid it.

[emphasis original]

In other words, online staff are constantly thinking about epistemic concerns: the environments in which the piece they're working on or the content they're handling will play, who will take it up as a resource, where it might go as a result, and what the system builders arrayed around the target environment might do with or to the piece.⁷⁸

This proliferation of niche brands and editorial products aimed at every interest and corner of the news market is one of the dominant strategies at MSNBC.com for heterogeneously engineering around the diverse and provincial demands of users participating in the conversation economy.⁷⁹ A product for every market can be reconceptualized as a resource for every system builder or an attempt at creating numerous trading zones and boundary objects. Whether a user is looking for headlines, game reviews, parenting tips, political commentary, breaking news, celebrity gossip, or information on a product recall, the idea is to offer a corresponding product. But the demands of the Web and the logic of branding, whereby—as Nizan put it above—different sub brands must cohere with the image and personality of a parent brand, can also be recalcitrant from the perspective of provincial system builders.

A strong television brand, for instance, does not always warrant a major Web presence from the perspective of MSNBC.com's management. One major reason for this is that the

⁷⁸ It's worth noting that the security felt by television editorial staff about the placement of their content is likely a bit overstated. Correspondents frequently think about which news shows might be interested in the pieces they're assembling. And while in relative terms, the outlets for television pieces—especially those assembled by cable producers attached to a specific program—are very stable, this is also a situation that is in flux, according to some sources, as television journalists increasingly look for outlets wherever they can find them.

⁷⁹ It's worth noting that this strategy is not by any means unique to MSNBC.com. Boczkowski (2011) has argued that the future of news may lie largely in niche editorial products, and in the following chapter I will point to just a few of the other places where this strategy appears to be in play.

amount or type of content necessary to forge a strong brand identity can be far less than the amount of content needed to sustain a major Website. We encountered this difficulty before in the previous chapter, in the form of MSNBC.com's request that the cable channel hire additional Web producers to develop content for a standalone MSNBC TV site. But it was a concern that extended beyond the fate of the cable channel's Web footprint.

An interesting contrast to consider with regard to branding and Web presence is between the NBC Nightly News and NBC News' Today Show, both of which are managed online by MSNBC.com. As at all the broadcast news networks, the evening news program, Nightly News is NBC News' flagship program. It is considered the centerpiece of the network's news division, it's television news lineup, and in many ways the embodiment of the NBC News brand on the air. Online, however, Nightly's Web presence is centered around a microsite on MSNBC.com, while the NBC News morning show has been spun off into a large independent site, Today.com. In the branding terms employed by Tillinghast and others at MSNBC.com, Today had become a "master brand" online, while Nightly has remained a "sub brand" on the Web, housed as a microsite within the larger Blue Site. I asked Tillinghast why the hierarchical relationship between the Nightly and Today brands was inverted between the broadcast network and the Web:

CT: [For a show to be a master brand,] You must have enough content. ...Today has four hours. Nightly has 21 minutes, or a half hour [with commercials] I guess if you're going to be apples-to-apples. Cable [which is now getting its own site] is all day and all evening, so those factors right away make you either a master brand or a sub-brand.

Meet the Press is a fantastic brand, but it isn't a site. You can't sustain a site with one

hour of television a week.⁸⁰ The other problem with Nightly—You couldn't elevate it to be a master brand for a couple of reasons: It doesn't have enough content. The stories it runs are more analysis and interpretation of the day's events, as opposed to an attempt to tell people what happened for the very first time. It's almost become like a news magazine. ...

JB: [But] there are successful analysis brands out there. Playing devil's advocate, ...[not to] compare [Nightly] to the Wall Street Journal or the Economist, but what makes it difficult to create a brand of analysis, if you were to add content beyond the twenty-one minutes of stuff they produce each day?

CT: Well, first of all, maybe calling it "Nightly" doesn't help. I mean, in some respects it's a little bit like Newsweek's problem, being called *Newsweek*. News and week are almost—that's an oxymoron, right? If you get it once a week it's not new. But, I think in a sense, NBC News is the brand more than Nightly. Nightly and NBC News are sort of one and the same. But the name NBC News would give you a broader platform to expand into lots of different subject areas that are beyond the scope of what Nightly does. [emphasis original]

In other words, if Blue Site cover editors had previously worried that MSNBC TV content would pollute their objective brand image with partisan commentary, Nightly News in effect had a different branding issue when it came to exposure on the Web: in some ways there was little to distinguish it from what the rest of the network was already providing to the Blue Site cover.

⁸⁰ It's worth noting that David Gregory, the moderator of Meet the Press, for a time created his own site, DavidGregoryTV.com, dedicated partially to the show. It is no longer in existence, and much of the online activity it hosted now takes place on Meet the Press' Newsvine-powered blog. Another example of provincial heterogeneous engineering with respect to online distribution.

As we've seen, the Today Show brand, on the other hand, has become a rallying point for life and style content—cooking, fashion, parenting, and other content geared toward the show's target audience of women, ages 25 to 34. This audience, and therefore this content, is extremely valuable to advertisers, but had little home within the Blue Site's more hard news-focused brand.⁸¹ In addition to the large volume of video produced for The Today Show's daily four-hour broadcast, Today.com became an immediate home for all the brand-consonant content the online staff could produce. Jennifer Brown, the director of Today.com, explained,

You have the five million people who watch the show a day. Can you imagine?

Converting ten percent of that would be a huge Website. But we're also not going into it saying we want to duplicate that audience. And we've done two, three years of extensive research to date just looking at who our audience is, who our audience is not, but could be. And, basically saying, "Where are the areas where we're allowed to play?" and really spin off of those. ... The show is always at its core, but what we're looking to do is build around that. It's a weird thing to say that the show is "only four hours." Because there's a lot of stories you can tell in four hours. But there's also a lot of stories that we know fit the audience, but may not have the best visuals, or it may be cost-prohibitive to tell it [through video], or maybe we know it's the right audience, but it just doesn't fit on-air.

And that's really what we're cultivating.

Moreover, the Web venture's market research showed that the young female target demographic pursued by the show also consumed an inordinately high amount of online video. So, even without all the Web-original content planned for the site, showcasing Today Show video online

⁸¹ It's worth gesturing here to the journalism studies literature, including Tuchman (1978) and Hartley (1982), which has long pointed out that hard news is a gendered category.

would lead to greater revenues than for the equivalent amount of video for shows with different demographics. The fact that the show *produced* more video on a weekly basis than any other at NBC News only made the proposition more attractive, as did the fact that Today content is broadcast and flipped to the Web during the daytime hours so crucial to news Website's traffic numbers (Boczkowski, 2010).

In MSNBC.com's terms, Today.com is an attempt to leverage a valuable portion of the news market in which the Blue Site had not previously been playing, or in which it had been playing only to a limited extent. Putting this all back into our own terms, the expansion of the Today brand online is an attempt to produce a boundary object, a distribution channel, that appeals as a resource to an economically desirable set of heterogeneous engineers.

We can see at this point how branding can be a resource in the pursuit of audiences online, but at the same time potentially recalcitrant for some system builders whose editorial product fails to fit the branding scheme required to beget the desired exposure. Notably, the NBC Nightly News has *not* tended to chafe at its placement online. During my fieldwork, Cynthia Joyce, the MSNBC.com Web producer assigned to the program said, "I do think that the Nightly staffers initially saw the Website as little more than a billboard with some extra bells and whistles—as opposed to as part of a larger distribution platform." However, as we saw in detail in the previous chapter, this was not so for The Rachel Maddow Show, which heterogeneously engineered aggressively against its placement within MSNBC.com's branding scheme.

Changing Platforms

One of the trends emerging at MSNBC.com during my fieldwork was a resurgence in the use of blogs across the site. Whereas, the launch of Newsvine's new blogging tool—and hence new blogs—had been stalled for months by the Blue Site redesign, by the time I arrived in Seattle in September 2010, Newsvine CEO Mike Davidson noted that the site was “launching new blogs every week now.” Part of this had to do simply with the tool's availability—once the software and basic blog templates were finally available, it became relatively simple to set up a blog for whomever requested one. But the increasing prevalence of blogs across MSNBC.com was also a reflection of the company's market strategy of offering news products for diverse interests and use cases. Blogs, as we've seen, were in effect small, easy to create brands that could be targeted to different interests, placing MSNBC.com content within reach of diverse audiences-cum-heterogeneous engineers, and thus opening the door for content to be further propagated across the Web. Tillinghast explained,

Whereas perhaps previously we would have just put up lots of news stories, now you need to have, say, blogs that people follow. So you have to give something consistent for people to follow within your site, as opposed to just having loose stories to follow. ... “Blog is” sort of the new term for a column. You get personalities, and people follow personalities. And they have an affinity for that. So it's a combination of both the subject matter and the person writing it or curating it, if you will. So, for instance, on our site, Alan Boyle does Cosmic Log. He's been doing space for over a decade, at least. And he has a big following. And so people want to be part of this community around Alan. And then they share it out from there. Or Bob Sullivan with Red Tape

Chronicles.⁸² So you get certain franchises that you can build upon that become a natural pillar or kind of a center for a community to form. So it has to have something that is constant enough for a community to feel like there's really a home there.

In other words, as we began to see in the previous section, beneath the large-scale branding pushes for massive new sites like Today.com, various producers and section editors at MSNBC.com were using Newsvine's tool to create numerous products and distribution channels targeted at niche audiences, who would "share them out from there."

One of the interesting aspects of this is that at the same time MSNBC.com began launching more brands aimed at more niche epistemic cultures, these projects were being supported by increasingly generic software tools. Nor is blogging or blogging software unique in this regard. In what follows, I'll provide a number of examples in which system builders at MSNBC.com responded to the need for increasingly divergent and niche editorial interests through the creation of publishing tools that were increasingly generic.

Newsvine's M3 Platform

In the previous chapter, I briefly mentioned Newsvine's third major architectural overhaul, the M3 platform. M3 was designed to fully transition Newsvine's platform from the software underpinning of a specific site, Newsvine.com, to a Web application that—while hosted on Newsvine's servers—could power a wide variety of Websites on any Web domain with little cosmetic resemblance to one another. This was accomplished through the use of successive class extensions, dubbed "chromes" by the developers. "Class" is a term from object-oriented programming. Much as in real life, objects in programming are tools with a number of uses

⁸² Both Boyle and Sullivan's blogs were among the first started by MSNBC.com and have been around for quite some time. Tillinghast here is using them as tried-and-true examples of something the site is currently trying to do more of.

defined by their designers. Analogous to the way a hammer can be used to drive nails or pull them out, classes operate on data in useful ways. A simple example of a class object would be a bit of code that, when given a set of data points, can present them variously as a list, a data table, or in the form of an outline, at the request of the programmer or designer. Programmers frequently use the same code on different data sets at different places throughout a piece of software, so to keep things straight they refer to the basic code as a “class,” and to each use of the code in a program as an “object.”⁸³

Classes are one of the key tools that allow Web developers and designers to create Webpages that display data in a broad variety of forms and contexts. A “class extension” in programming is a method of modifying a class for use in a specific context, analogous perhaps, to swapping the head on a socket wrench in real life, or adding snow tires to a car to deal with icy conditions. Only, in the less corporeal world of scripting and software, (a) the original, unmodified class remains available for use in other contexts, and (b) far more extensive modifications can be made without as much penalty of effort—something more like transforming a car into a boat while keeping the engine and passenger compartment. The structure of Newsvine-powered Webpages is controlled by classes. “Chromes” in the context of Newsvine are a series of sequential class extensions that can be added to a Website to successively refine its appearance and functionality.

Returning to our automotive example, say we were talking about building a car instead of a Website using the concept of chromes. We would start by building the basic, generic components needed for every car—an engine, steering wheel, driver’s seat, wheels, brakes, etc.

⁸³ This, along with a number of the descriptions of terms in this section, is a somewhat simplified explanation for the sake of the present discussion.

Once these were in place, we could add an initial chrome specifying the type of car—an SUV, crossover, sedan, or subcompact, say. If we’ve chosen the last option, the class extension(s) included in this chrome will make the necessary additions and modifications to our previous design to give us a generic subcompact car. We could then add another chrome on top of this one to specify the sort of subcompact we wanted—a Toyota Yaris or Hyundai Accent, say. Another chrome layer might then be added to give us a color, and another to install the sports package, and so on. Moreover, because chromes are layered, if we decide we want an Accent instead of a Yaris, or an SUV instead of a subcompact, we can always strip away a few layers back to the chrome where this decision was made and add other chrome layers to build a different car without starting from scratch. Finally, because this process is non-destructive—the various combinations of objects and modifications we create remain available to us—we can simultaneously build all sorts of “cars” off the same codebase. Once the “generic subcompact” chrome layer is in place, we can use it as a starting point to design a bunch of different subcompacts. Or we can start with the Yaris layer and crank out versions of the car in dozens of colors. The same principle goes for SUVs, crossovers, and sedans in our example. And if we decide one day that we want a totally new kind of vehicle—a semi truck, say—we can return to the generic design with which we began and create a new series of chromes for semi trucks without disrupting the workings of the vehicles we’ve already assembled.

The various blog templates used at MSNBC.com, named for their creators—Ashley Blogs (now retired), Mike Blogs, and Martin Blogs—look quite different because they are built on different chromes. At the same time, there are many different Martin Blogs across MSNBC.com that bear far greater resemblance to one another than to an Ashley Blog, but are

still different from one another. These various Martin Blogs are also built on different class extensions layered on top of the “generic Martin Blog” chrome. While other technologies, especially CSS, are also used to alter the cosmetic look of the different blogs, chromes give the different blogs a whole other level of flexibility, so much so that they allow Newsvine’s basic codebase to be used as the basis for sites that aren’t blogs or Newsvine columns at all. As Mark Budos, Newsvine’s chief technical officer recalled, chromes were introduced to the M2 architecture to accommodate various development requests from MSNBC.com. As the scope and frequency of these requests increased, chromes ultimately became the basis for the new M3 architecture.

M2 was all based on Newsvine requirements. But the chrome settings that we put into M2 were obviously for MSNBC because they had all of these different brands they wanted to support. They wanted a “Nightly News Discussion Club.” They wanted an “American Express Your Business” video site. They wanted an “Elkhart Project” blog, which was a completely different design than anything we’d done before. So they started to have these different looks. They did this “Today Moms” thing, which was pink. So, I mean there’s all these completely different brands that were using the same architecture. In 2010, MSNBC.com purchased control of a popular Twitter account, @BreakingNews, which tweeted links to (what else?) breaking news items. The company treated the development of Breaking News as an internal startup project and assigned a small team of three developers to turn it into a brand aimed at capturing the market for what Tillinghast called “the moment of discovery” of news. Because MSNBC.com was taking over and expanding an existing Twitter stream, rather than building an editorial product that could launch on a date of their choosing, it

needed to spin up a corresponding Website in a hurry while the three-person team assigned to Breaking News decided on a more permanent Web presence. This task fell to Newsvine, which was able to use the M3 architecture to launch an initial site within days.

M3, then, represented a dramatic reworking of Newsvine's architecture in response to the demands placed on the company by MSNBC.com. Through it, Newsvine's platform went from being highly specific to the situated social and technical demands of the Green Site that we encountered in the previous chapter to a launchpad for a wide range of sites ranging from blogs to standalone sites built by MSNBC.com for marquee advertisers to Websites for entirely new properties and companies within the MSNBC Digital Network. As I will discuss later on, this shift has not been without impact on the Newsvine community. First, however, I wish to point to another major example at MSNBC of architectural flexibility.

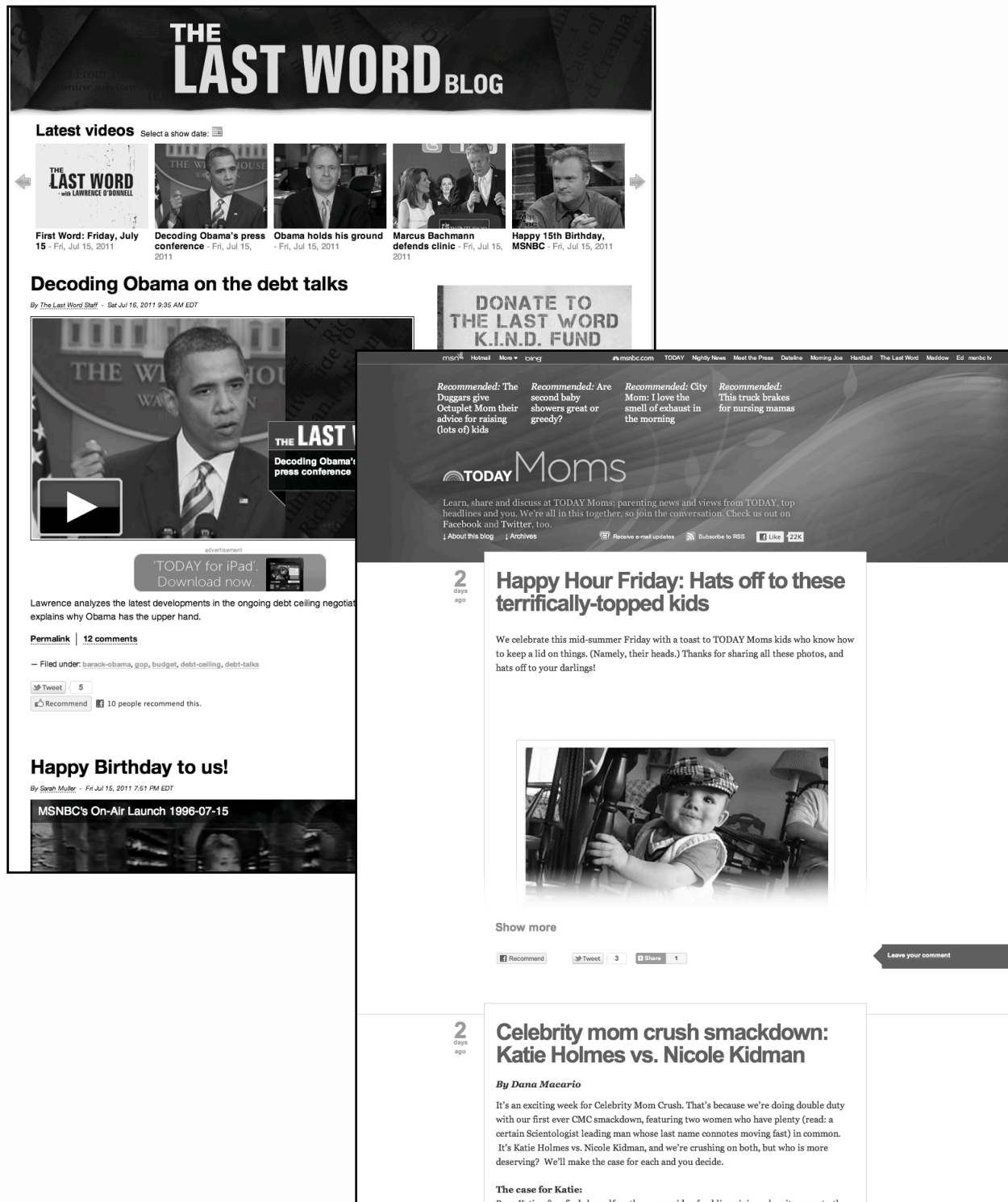


Figure 4.1 // Blog Designs

The Last Word blog is built on the “Mike Blog” template, while “Today Moms” uses a “Martin Blog” template. The differences in page structure are accomplished using chromes.

SkyPad

In the previous chapter, you'll recall that the launch of the Maddow Blog was delayed by an extensive redesign of the Blue Site's story pages, which were not only receiving an updated look, but also being built on top of a new software architecture. Ironically, this architecture upgrade, which involved the introduction of a system called SkyPad, was in part intended to help speed up the site's years-long development cycles. Newsvine's director of technology, Josh Yockey said of MSNBC.com,

They're getting better. They had real problems when we got acquired on turnaround time for changes of features. Because their focus for a long time was stability. A couple years before we got acquired they had a lot of problems with stability and the server just not being up. And so they had made an organizational focus on ensuring that there was no chance that when you went to MSNBC.com there wasn't a fast page showing you news. And to that monomaniacal goal they ended up sacrificing a lot of agility in their development.⁸⁴ So they were very careful about rolling out features and very careful about developing them and very careful about testing everything through. The upshot of which is that everything was really stable, but if somebody went in and said, "Hey, we want to change our blog platform," it would have been two and a half years to get something turned around.

To make development more flexible, and hopefully much faster, MSNBC.com added what they referred to as a "compositional layer" to MSNBC.com's publishing platform in the form of SkyPad. Tillinghast explained SkyPad as a virtual "punchdown block," after the old routing

⁸⁴ These sorts of tradeoffs of stability for speed are a common engineering problem, often encapsulated in the "project triangle," a diagram which prompts designers with the phrase, "fast, good, cheap; you may pick any two."

systems used with phone equipment. A punchdown block allowed its operator to plug a collection of wires into either end and make connections at will between any sender and any receiver. In the same way, where the Blue Site and other sites in the MSNBC Digital Network had once consisted of single Web interfaces connected to single databases, SkyPad is intended to ultimately allow any site in the MSNBC Digital Network to access data from any other, and conversely to allow the company to spin up databases for information not tied exclusively to any one site. “The whole point of all this is that you can replace the front end and back end components independently,” said Tillinghast.

So it’s not a monolithic system. These are all components. And that way you could, say, upgrade the editorial UI to keep it all fresh and Webby, even though you don’t change anything on the back. Or you could add a new database on the back so that you could do more queries for stories or populate databases. For example, a long time ago we fed in the bridge repair data for the entire country so that after the Minneapolis bridge collapse, you can go and find out what the status of a bridge in your own neighborhood is. We were pulling that out of the database. Well, now that database could just be plugged right into SkyPad and it becomes really easy for an editor to query, to do a report like that without much effort.

SkyPad is thus intended to have several important effects. First, it speeds up development by increasing the modularity of the sites employing it. User interfaces and databases become isolated components to be updated and swapped out like so many interchangeable parts, thus limiting the scope of the work that has to be done to refresh any one piece of the site.⁸⁵ Second,

⁸⁵ Importantly, modularity of components is a common development strategy, not unique to MSNBC.com.

it increases the diversity of data sources developers and, ideally, editorial staff can draw from—rather than trying to fit some interesting new data set into a procrustean database tied to a particular site’s CMS, a new database can be created for that content and “plugged in” to SkyPad. Third, and finally, SkyPad will effectively serve as a massive API that allows developers and designers to easily call up and flexibly present data from any source within the MSNBC Digital Network, which in turn means they can ideally assemble new page templates and whole new Websites on the fly.

As mentioned in the previous chapter, one of the first products to come out of SkyPad was the new MSNBC.com story page template, which allows editors to mash up, arrange, and continually update any combination of text, video, photos, illustrations, user comments—and ultimately other media as well—from across the MSNBC Digital Network. One MSNBC.com staffer in New York described the benefits of the new page templates:

There’s architectural flexibility of just being able to tell the story as it should be told versus sticking to a regulated template. Does that make sense? And I’ve seen it in action. ... A great example is a breaking news story. ... So the story breaks and I have very little information. So you get a headline, and you get like one paragraph, “More to come.” So...then they get the video, right? So, [previously] it’s like, you link to the thing, it pops up its own standalone video player, takes time to load. But now it’s like, “Man, throw that video right on top of where that text was.” You know what I mean? So breaking news stories can evolve naturally in the same space versus having to Frankenstein it all together.

At the time of my fieldwork, many of these capabilities were still run through MSNBC.com's aging proprietary CMS, Workbench. With the SkyPad compositional layer in place, Workbench had been reduced to an editorial interface, which allowed some of the flexibility described in the above quote, but was due to be replaced by a new, more modular interface called "Project Redstone," that was intended to allow editors to more easily take full advantage of the new architectural flexibility of the Blue Site's story pages—and eventually in all likelihood work with other sites altogether. Much as the M3 platform did for Newsvine, SkyPad turns the MSNBC.com CMS into a generic platform for ingesting and presenting a wider array of content in increasingly diverse forms to serve an ever-expanding array of editorial strategies and interests.

Generality in the Service of Specificity

Each of the above the changes undergone by the architectures of Newsvine and MSNBC.com were substantial, labor intensive, and—most interestingly—aimed at making the platforms useful in a broad array of highly specific, even unforeseeable editorial circumstances. If the MSNBC Digital Network sees a brief window of opportunity to acquire or launch a new brand, it can now, in theory, spin up a corresponding site rapidly, whatever their unique editorial requirements. If the über-specific editorial need ever arises to mash up local exit polls with bridge repair data, that too will be possible in theory under the new system. This all dovetails with MSNBC.com's publicly espoused "one size does not fit all" market strategy of creating editorial products to suit a broad variety of needs.

What's interesting is that this proliferation of niche epistemic cultures and their highly specific needs is being underwritten by the construction of ever more generic and multi-purpose

publishing tools. This is true of M3 and SkyPad, as we've seen, and also of some of the other MSNBC.com technical artifacts they support and interact with, including the Blue Site story pages and the remarkably multi-purposed video player we encountered in the second chapter. This flexibility is accomplished through a combination of strategies, including the construction of artifacts built to be inherently flexible, as with story pages that will accept nearly any kind of content, and through the assembly of artifacts designed to be rapidly repurposed, as with chrome-powered sites built by Newsvine that can quickly be stripped of one style and given another.⁸⁶

Mass Reach Without Mass Media

Initially it might have been tempting to divide the sorts of epistemic concerns surrounding branding on the one hand, and this sort of architectural interoperability on the other, into two classes. But our focus on heterogeneous engineering throughout this manuscript has taught us to be wary of such hard distinctions. This combination of the proliferation of niche brands and editorial products, combined with increased architectural flexibility should be seen for what it is, or at the very least what it attempts: mass reach without mass mediation. In other words, a strategy for enrolling a diverse array of otherwise recalcitrant audiences-cum-heterogeneous engineers into one's own system.

The architectural components of this strategy are often constructed to include affordances for the rapid repurposing not just of architecture, but of content. MSNBC.com's video player,

⁸⁶ Again, stepping back from organizational boundaries, these strategies aren't unique to MSNBC. Much has been made of how the popular software tool WordPress, for instance, transitioned from a single-use blogging tool to an extraordinarily flexible content management system capable of powering sites that look nothing like blogs (Mullenweg, 2009). Similarly, much of the success of popular platforms like Twitter and YouTube has been attributed to fact that they were generic enough in their functionality to support uses their designers had not initially envisioned (Rao, 2011; Ma, 2009).

for instance, groups clips by show, playlist, topic, and search query to meet the needs of both Web producers and users with highly distinct provincial requirements. Similarly, Newsvine's blogging tool allows editors publishing an article to simultaneously cross-post it to any MSNBC.com blog to which it might be relevant. A writer for Technolog, the site's tech blog, for instance, can simultaneously publish story about "parental controls on Facebook" to Technolog and the Today Moms blog, or a post about a new Xbox product to Technolog and the site's gaming blog, In-Game, simply by checking destinations off on a list. A columnist whose primary focus, then, is on maintaining a "personal brand" or contributing to a particular section of the site, can nonetheless easily send content anywhere on the site.

But as we saw in the previous chapter, architectures are simply a technical piece of heterogeneous system that lashes together myriad components, only some of which are what we'd traditionally think of as technology or software. And while architecture can be made more flexible, other components want to hold onto their shape. As Newsvine's director of technology Josh Yockey put it, "the community's not flexible. You can't just plug it into new content and say, 'Go commune!'" Just as we discovered some of the ways in which niche branding creates recalcitrance for system builders, then, it is instructive to look at the the recalcitrant accoutrements of flexible architectures.

The Comment Problem

Both researchers and practitioners have noted that one of the greatest challenges facing legacy news organizations online is simultaneously providing forums for user comments on the

one hand and keeping those spaces civil and productive on the other (Singer, 2004; Seelye, 2007; Hermida & Thurman, 2008; Davenport, 2010). As Singer (2010) put it,

In general, new relationships between users and journalists seemed valuable as an abstract concept but often proved difficult in real life. The open discourse invited by a “comment is free” philosophy sounds great in theory—all that good democracy-in-action stuff. But the reality was rougher, and many journalists expressed dismay over the disturbingly confrontational nature of user contributions to the conversation. (2010, p. 280)

ABC News, for instance, has had sufficient trouble with rowdy comments that it has found it necessary to maintain a full-time moderation staff to review every comment posted to its site. Other networks have gone through the immense trouble of building sophisticated commenting systems, only to shut them down when they got too rowdy. As discussed previously, in 2007 CBSNews.com shut down comment threads on all stories relating to then-Presidential candidate Barack Obama, telling the New York Times that the site was unable to immediately find a way to deal with the “persistence and volume” of racist comments the stories were attracting (Seelye, 2007). Until the integration of Newsvine’s blogging tool into the Blue Site in 2010, all comments on MSNBC.com blogs were subject to moderation before appearing on the site at all. The staff at Newsvine were universally opposed to this “pre-moderation” strategy, calling it “the quickest way to kill a conversation.” Newsvine staffers’ greatest criticism of pre-moderation and the comment systems on mainstream news sites more generally was that they were designed around the idea that users were there to leave feedback on a story, rather than engage with one

another. In the Newsvine offices, this design strategy was derogatorily referred to as the “urinal style” of comment system design. Newsvine’s director of technology Josh Yockey explained,

The idea that there can be these sort of running conversations moving around the site and users engaging with each other on topics that the editors aren’t controlling, I think is sort of difficult for them to design around. And so they sort of favor what we call the sort of “urinal style” of commenting, where everybody goes in and leaves their contribution and then leaves, and then we flush it out and then, you know, the next guy comes in or whatever. As opposed to a conversation.

For philosophical reasons—and ones of convenience—the Newsvine developers preferred the idea of using their existing comment threads on MSNBC.com blogs. This was not a universally popular idea among the editors and Web producers at MSNBC.com, however, and in 2009 when I first talked to Mike Davidson Newsvine was preparing to build a pre-moderation option into its blogging tool for the Blue Site. At the launch of the blogs in 2010, however, this hadn’t been done. Davidson explained,

We haven’t built that in. We were getting a lot of requests for that before we launched the new blogs, because that’s the way people are used to doing things. There were some editorial groups that said, “We’re not moving onto the new system until we can premoderate comments.” It was those sorts of requests-slash-demands that made us think that we needed to build that in order to get everybody onto the new platform. But we just *didn’t* build it, and people moved onto the new platform. Most people seem to like it better because now we don’t have huge backlogs of unapproved comments that somebody’s got to get to. So it seems like a much lower-maintenance system for

everybody, which people seem to like. A little bit less control, but much less effort required.

This account, of course, is from the vantage point of Newsvine and paints the benefits of the new moderation system as ultimately overcoming the recalcitrance thrown up by resistant editorial groups. In practice, resistance among editors to the abandonment of pre-moderation did not come strictly from the conservative editorial impulse suggested above by Yockey. This is not to say that MSNBC.com's editorial staff is devoid of the conservative "gatekeeping mentality" toward comments described by Hermida and Thurman (2008), but rather to point out that there are other reasons for preserving pre-moderation. Some of the pushback, for instance, was very much in line with Christian Davenport's (2010) observations in the Washington Post that vitriolic Web comments could at times scare off sources. In any event, in 2010 Newsvine's community moderation system went live on MSNBC.com and subsequently spread across the site with the launch and conversion of numerous blogs, as well as the inclusion of featured Newsvine comments on the Blue Site's new story pages. When this happened, things were not uniformly neat and tidy from anyone's perspective. Ian Sager, an MSNBC.com Web producer described the situation from his vantage point at MSNBC.com:

A few months ago we had a bunch of task forces that we set up, which were thinking broadly just about the site. And I was on one about moderating comments and interacting with users. A lot of people had concerns that interactions on Newsvine were getting really rough and a little dark. Characters on health stories who were sharing very personal stories about weight loss or trials and tribulations with drugs, or really intimate stories about their life, where they were risking a lot to speak out—were just being

trashed by people. And for no reason.⁸⁷ And it was getting to the point where it was really nasty. And we were having to hide a lot of the comment threads. And people were voicing their concern that they didn't know if this was a problem with the Newsvine community. They didn't know if we were moderating comments correctly. Maybe an editor needed to jump in there when things got out of hand and say, "Hey, I'm going to ban this comment. I'm going to delete it because this is not cool. And anyone else who tries behavior like this, from now on we're deleting this." Basically just showing sort of the rules of the game.

The conversation at MSNBC.com that Sager relates here is fascinating to consider in relation to what we saw happening to the Newsvine community in the previous chapter. Newsvine has built a technology that relied as much or more on carefully cultivated social norms than on its technical platform. When integrated into the Blue Site, that technical platform was effectively plugged into an entirely different social environment—the raucous, vitriolic melee so frequently described by journalists and scholars alike as occurring on legacy media sites. People who come to leave thoughtful comments or interact with one another were mixed in with others who, as Femia put it, “are screaming at their TV and don't realize there's a human on the other end.”

And while Newsvine's full-time human moderator was on duty, much of his job was dependent on the ability of the community to accurately locate and report abusive comments.

⁸⁷ In my interviews at Newsvine, which took place before this conversation, Davidson acknowledged this same issue and provided some of the same examples from MSNBC.com health stories. On the one hand, he said, there were some stories where the comments were “heartless” to the extent that “we feel bad about that as a company.” On the other hand, he also pointed to examples where the valence of user comments could arguably be seen as a matter of editorial outlook, such as a story in which the sales rep for a Botox provider apparently was used a source and offered herself as an example of the procedure's benefits. As Davidson recounted it, “people in the comment threads were like, ‘Oh, my God. You look terrible. Women do not need to get plastic surgery to be beautiful. This is wrong.’ To me, I read that stuff and I'm proud of it. I think most women who read most of these comments would be proud of what our community was saying, which is, ‘Plastic surgery is something that the media has made you think that you really want. You would have looked better without it.’”

Unfortunately, the community that understood and abided by the norms on which the software was predicated increasingly avoided the Blue Site threads altogether. As Josh Yockey explained,

I think a lot of the Newsvine people just realized that it wasn't worth going into these, you know, ten thousand comment-long threads and thoughtfully replying to each one of them, or whatever: "Excuse me, you should educate yourself on the Code of Honor."

You know, they just got out.

Stripped of its social components, the Newsvine comment platform continued to operate from a technical perspective, but ceased to function at the level originally intended.

With that said, it's important to note that, according to the individuals I spoke with, user behavior differed widely across the various Blue Site blogs and pages. Several properties, including the Maddow Blog, Alan Boyle's long-running Cosmic Log astronomy blog, and the First Read politics blog all benefitted from extensive moderation and community building efforts on the part of their proprietors. In any case, it's interesting to note in Sager's commentary above that a social component—editors stepping in to moderate comment threads, give slaps on the wrist, and coach users on proper behavior—was precisely the component that Blue Site staff were considering adding back in at the time of my fieldwork.⁸⁸

At the same time, the "firehose" of new Newsvine registrants from the Blue Site continued to increase as Newsvine blogs and comment threads began to permeate MSNBC.com. This continued and intensified many of the pressures we visited in the last chapter on Newsvine.com's social structure, such that while the Green Site still functions reasonably well as a social news site, it has become continually harder to moderate. As Yockey put it,

⁸⁸ A trial system was devised whereby staff from each of the major Blue Site sections (e.g., Health, Entertainment, Business, etc.) would begin moderating comment threads in shifts. The results of this experiment will be interesting to inquire about; the trial was just beginning at the time my fieldwork ended.

Our struggle right now is that our community implementation worked pretty well at the scale that Newsvine was at and the scale those conversations were at. But MSNBC traffic levels in some cases have sort of overwhelmed conversations. Obviously if they have a link to a conversation from the front page of MSN you just get this mass firehose of people who are unfamiliar with our community standards. And they are actually not part of the community at all. So they just go into urinal mode and they fire back their feedback. And so our existing community members tend to just pull out of those conversations, because they're just overwhelming. They don't report bad comments or anything. They just stay out. And they don't engage in conversation, since they know that the guy they're responding to is very unlikely to ever come back again. It's sort of "fire and forget" stuff. You either have to try to get those people into the community, which we do some works toward. But, you know, at some point they're not coming in.

On the one hand, Newsvine has continued to lash together resources to preserve its existing "community implementation"—at the time Yockey made this comment, he was designing a Bayesian spam filter that was intended to not only assist in flagging inappropriate comments in forums where Newsvine community members feared to tread, but also to help highlight interesting and useful ones, thus identifying helpful content and by extension helpful users. But over the longer term, Davidson was proposing an even larger change that would change the way Newsvine comments and communities operated in far more fundamental ways.

Newsvine Groups 2.0

One of the fundamental features of Newsvine's software is the ability to create groups—columns to which multiple users can contribute. Groups, which can be created around any subject, are not only a way for users with similar interests to congregate on the Green Site—they also became the starting point for building the company's new blogging tool, as MSNBC.com blogs are effectively columns shared by multiple authors. But user groups—at least on the Green Site—also have another function. When an article is published or shared to a group column, an additional comment thread is created, housed in a tab alongside the main public comment thread, where group members can converse solely with one another about an article. During my fieldwork at Newsvine, Davidson laid out for me a major change he was proposing to Newsvine's group comments architecture. I include an extended passage here from his description:

To me the big problem that nobody has solved yet is: How do you take a very, very large group of news readers online and socialize them in a productive, constructive, polite, accretive, entertaining way. I think everybody that's tried to take large amounts of people and create one community out of them has failed. One of the things about Newsvine is that it was a self-selecting community from the start. The people who were there during the alpha were friends of mine. The people who were there during the beta were friends of theirs. They were people that were there for a reason. And it kind of grew out from there. We had this nice, big budding community of very thoughtful people and what we've kind of done at MSNBC has been the opposite. We've taken this gigantic number of people—40 million people—and tried to inject community into that. We've tried to

make them talk to each other and create this big community out of this large mass of people that already exists. And I think the results have been mixed. I think from a metrics standpoint, it's been a great success. ... But when you actually go in and look at some of the conversations, a lot of the conversations, to be honest, that are occurring specifically on the MSNBC site—not so much on Newsvine—it's obvious that a lot of people are talking past each other. We have people getting up on soapboxes and just spewing their uninformed opinions, which is not really what we're interested in. ... And so, I've come to the conclusion that you just can't have communities above a certain amount of people. If you're going to take that as a fact, then you can either say, "Okay, we're not going to have any community on our site," and go back to the way things worked ten, twenty years ago, or you can say "We're going to have a lot of small communities." I think that's something nobody has done yet. I think nobody has taken a large-scale news site and created thousands and thousands of communities of likeminded people out of their audience. That, I think, is the next revolution in online news.

The idea, which was still in early development in September 2010, was outlined to me by Davidson in the following terms. Commenters would be divided into groups of roughly 150 users each by virtue of their similar interests or other mutual affinities (e.g., college friends, say).⁸⁹ Just how this carving up of the Newsvine-registered user base would take place, or how it might be done gracefully, was as yet undecided. In any case, rather than large public comment threads, users browsing the Blue Site would instead converse about articles only in the groups of which they were members, though group discussions could be browsed and comments voted on

⁸⁹ The number 150 may be familiar as "Dunbar's Number," a hypothetical limit in management circles, to the number of individuals who can productively work together in a group.

by unaffiliated visitors. New users on MSNBC.com would be initially unaffiliated with any group, and as such their comments would be invisible to the public—or at the very least kept in a quarantined Greenhouse-like area of the site, visible only to visitors who dug for them.

Meanwhile, Newsvine's existing karma system would be modified to rate the quality not just of individual users' contributions, but those of entire groups. Groups that made especially good contributions and received excellent ratings would be elevated in status on the site, and groups that did especially well would be afforded special privileges, foremost among which would be placement alongside highly trafficked MSNBC.com content. This selective access to public exposure would result in friendly competition among groups for higher rankings and better placement on the site, all of which could, in principle, only be attained through continued high-quality and civil discussion. What's more, new members would only be admitted to groups by existing members. Because a person's comments would only receive attention if they appeared as part of a highly ranked group's discussion, a fierce competition would also develop among unaffiliated users for membership in well-rated groups. Existing groups in turn would sift through the quarantined comments of unaffiliated users looking for particularly high-quality contributions, hoping to thereby recruit promising members whose commentary would help them rise to the top of the rankings. The new quarantine area, in this sense, would resemble a sort of conversational NBA draft. "If you get accepted into a group that has a lot of privileges, that's kind of like having waterfront property on MSNBC," said Davidson.

So if five of the greatest groups on the site have carte blanche privileges to comment on the Maddow Blog, on Hardball, on Countdown, on just about every property, then getting into one of those groups is a privilege. And it may take awhile for you to do. If we put

artificial constraints on the number of people that can be in a group, for instance, then that makes it even harder. It's going to be an experiment how much effort people will take to put themselves in a position where they have a good amount of privileges around the site. But at the same time, it's a sliding scale. We can make it easier or we can make it harder. We want to make sure that we at least nail the baseline, such that when it's turned all the way to the easy side of the dial, that that's sufficiently easy enough.

Turning it the other way is easy for us to do—making it harder for people to get into get into groups, making it harder for people to comment.

Ratcheting up the difficulty of membership or the seriousness with which users regarded the system might involve the use of a private beta period, such as that on which Newsvine's original community was founded, a nominal fee for access to the discussion feature, or caps on the number of members allowed in a group, such that low quality contributions could get one ejected in favor of a more promising user. An increase in the quality of comments would also ideally create more opportunities for featuring user-contributed material on the Blue Site. Finally, it's worth noting that not all groups would be competitive—circles of college friends or co-workers, for instance, might form a group for its own sake without the intention of competing for public exposure.

Much could be said here about Davidson's proposed commenting system—on the potential for users to self-select into “echo chambers” (Sunstein, 2007) devoid of opposing views, on the “gamification” of discussion through the creation of a system where groups compete on the basis of interesting conversation (Zichermann, 2011; Bogost, 2011), or the commodification of discourse in the form of “waterfront property” on MSNBC.com. Of course,

similar activities are happening across the Web. Concerns over the potentially polarizing nature of online media consumption began not long after the Internet became widely available (van Alstyne & Brynjolfsson, 1996). Users on Twitter and many social media sites compare follower counts like trophies. And several sites—most notably Gawker’s media network—have begun introducing tiered commenting systems in which only trusted users’ comments appear on public story pages. A tiered Gawker-like arrangement was actually another option for an upgraded commenting system being bandied about during my fieldwork in November 2010.

In the present context, what’s unique and fascinating about Newsvine’s proposal, whether or not it’s ever enacted, is that it heterogeneously engineers a solution to the problem of a recalcitrant user base by carving users up into myriad niche editorial cultures, that can be selectively placed and promoted anywhere within the MSNBC Digital Network. I don’t doubt the sincerity of Newsvine’s goal to create civil discourse on a mass media site, nor do I question their potential for success. What’s interesting is that they aim to achieve it by effectively engineering the user community into groups that can be managed as a collection of brands, compatible with MSNBC.com’s larger branding scheme. It’s easy to imagine editors and executives arranging Newsvine groups in much the same way they arrange sub brands—selecting out ongoing political discussions, life and style conversations, debates over game systems, and deciding on their placement and prominence on the basis of their consonance with the image of the site’s various properties.

Friends of Thine and Friends of Theirs

The new group commenting architecture and the corresponding challenge that Davidson lays out—of designing a socio-technical system to productively socialize the overwhelming numbers of commenters who frequent large legacy media sites—in some ways signal a major shift in Newsvine’s system building and a measure of how the local teleologies of system builders can change as they enroll new and recalcitrant resources. The social media company that began by developing a prominent publishing platform for everyday users is now developing products to suit the needs of one of the largest media companies in the world. It may even be end up the architect of the new MSNBC TV Website. For MSNBC.com, Newsvine has come to be described as a “design shop” or a “white-label brand,” creating products that bear other companies’ imprimaturs. Others described it as an “ingredient brand,” akin to the manner in which small GORE-TEX labels are affixed to prominently branded North Face jackets. The Newsvine developers were becoming used to these labels during my fieldwork.

At the same time, if the focus embodied in the proposed comment architecture is new, it nonetheless shares a surprising amount of DNA with the objectives of Newsvine’s initial system. Newsvine’s original mission of designing spaces where mainstream media and citizen media could co-exist and benefit one another is arguably still intact. After all, if the best contributions of Newsvine users rise to the top of an MSN site garnering tens of millions of unique visitors each month it would give previously anonymous publishers remarkable exposure. An element of this mission could certainly be said to have been accomplished. But the “new” and “old” Newsvine systems would share DNA in another important way as well—they would be built off the same codebase. Due to the poor economy and other factors, Newsvine, as we saw in the

previous chapter, never received great increases in staff or resources. Yockey talked about the impact this has had on the company's products—here he is discussing the origin of MSNBC.com's polling feature, "Question Boards," but he could equally have been talking about many other features and products the team has built:

We didn't want to get in a situation where we were maintaining a bunch of code for us [Newsvine.com] and a bunch of code for MSNBC and it ended up being 2x, without changing the size of the staff or anything. And I found ways to mold [the requested] features into our existing capabilities. And then it was a lot of front-end code to sort of make it look like how they wanted it to look. So, a lot of Javascript and a lot of templating.

Nearly every product Newsvine has built for MSNBC.com has contained code from the Green Site. This works well for Newsvine as a system builder. Improvements made for MSNBC.com can in principle be turned around to users on Newsvine.com, which the team still views as their core product, and which still carries the citizen media branding flag for MSNBC.com. In practice, such improvements often get rolled out slowly. The site looks much the same today as it did after its acquisition. Davidson remarked that,

If you're a user of Newsvine, you feel like Newsvine employees work for you. Like, when I use Twitter, for instance—and I've got a lot of friends at Twitter—I feel like they work for me. I feel like everybody who is working for Twitter, the company, right now, should be working on making the user experience better for me, the user. They should be at my service. I feel that way with every company. I feel that way with Facebook. I feel that way with my bank. Everybody. And so if I was a Newsvine user that used the site

every day, I would feel the same thing. I would be like, “Okay, well I know the staff is small, but shouldn’t they be adding more features to Newsvine? Shouldn’t they be speeding it up? Shouldn’t they be looking into ad issues? All these other things?” And we think to ourselves, “Yeah, we should be.” But we have all these other things that we also have to attend to.

From the vantage point of Blue Site staff, the Green Site technologies can occasionally have unpredictable consequences. During my fieldwork, for instance, Newsvine’s new blogging tool would occasionally become a recalcitrant object for editorial staff when one of their stories would encounter, say, a profanity filter intended for Green Site users. And we’ve already seen how the initial Green Site commenting features yielded mixed results when applied to Blue Site properties. The dual-use platform is nonetheless essential, from Newsvine’s perspective, if it is to keep maintaining the Green Site while developing new tools for the rest of the MSNBC Digital Network.

All of this means that if Newsvine were to develop a new groups architecture for the Blue Site—or for a cable site, for that matter—it would in all likelihood ultimately be applied back to the Green Site, if not simultaneously released there. Tyler Adams, Newsvine’s full time moderator, as well as the other Newsvine staff I talked with thought this would go well, that both the Green and Blue Sites would benefit from the introduction of the new system. Whatever the case may be, the Green Site will have made a fascinating transition from a small community built on and around norms developed by “friends of mine and friends of theirs” to one architected in part to help make governable the behavior and (frequent lack of) norms exhibited on one of the most highly trafficked media sites in the country.

Emergent Qualities of Distribution Systems

Given the amount of coordination that this proliferation of brands and increased flexibility of architectures would seem to require, and the cross-cutting nature of the strategy at MSNBC.com, it would initially seem to defy our notion of heterogeneous distribution systems as being forged provincially. But there are significant ways in which it fits this scheme. First, Couldry (2008) reminds us that power asymmetries, and thus top-down management, are easily explained in actor-network friendly terms by considering corresponding asymmetries in available resources that are historically situated. The basis of this argument is one of the points on which Law (1992) is most frequently quoted:

If we want to understand the mechanics of power and organization it is important not to start out assuming whatever we wish to explain. For instance, it is a good idea not to take it for granted that there is a macrosocial system on the one hand, and bits and pieces of derivative microsocial detail on the other. If we do this we close off most of the interesting questions about the origins of power and organization. Instead, we should start with a clean slate. For instance, we might start with interaction and assume that interaction is all that there is. Then we might ask how some kinds of interactions more or less succeed in stabilizing and reproducing themselves: how it is that they overcome resistance and seem to become "macrosocial"; how is it that they seem to generate the effects such as power, fame, size, scope, or organization with which we are all familiar (p. 380).

In other words, we can recognize management at MSNBC.com as a provincial system builder in its own right, one that wields a uniquely large set of resources assembled through corporate

partnerships, contractual agreements, and so forth. A history of the firm is not warranted here, but even without it we can appreciate the historically contingent, situated, and heterogeneous resources that give MSNBC.com management access to a good deal of power as a system builder, without resorting to thinking of systems in terms of firmly structured hierarchies. Nor is management monolithic in any sense—we've already encountered executives making different arguments and pursuing different agendas over the course of this manuscript. We should not discount managerial activities as leaning on hierarchy or involving less in the way of heterogeneous engineering than other system building activities. Jennifer Brown, the director of Today.com, for instance, recounted her role in terms highly consonant with the notion of heterogeneous engineering:

It's really good that I started out as an on-the-ground reporter. ... Because I think that's carried into internal reporting. I'm very, very aware of what all the different departments are doing, and how to connect the dots between, "This person is asking for this," "This group is working on this," "This sales team is selling this." It's hard to do. Which is why that skill has evolved into this outwardly facing title, "director of strategy and development." So it is hard and I would never know how to write someone a guide to how to do what I do. But there is something, just about connecting with people and having coffee with them and sending funny emails and IMs and just knowing what's going on.

We can begin to see in Brown's quote the heterogeneity of tools, motives, and concerns that have to be aligned to unfold the local teleology with which she is concerned.

A second reason why large-scale coordination does not belie provincialism is that the latter is an express managerial *strategy* of the company. Insofar as top-down authority exists, it is often used to empower provincial system builders. Companies MSNBC.com has acquired, like EveryBlock and Newsvine maintain their own internal staff structure. With Breaking News, the social media company MSNBC.com launched internally, the small team were given independent authority over their product outside the normal reporting structure of MSNBC.com. And major initiatives within the company, like the creation of the video player or the spinoff of Today.com, are often handled not by individual units within the company's official hierarchy, but by the sort of diversely composed project teams described by Deuze (2007). Tillinghast explained the rise of project based management alongside MSNBC.com's more traditional managerial structure in terms that tie together the proliferation of brands and the flexibility of platforms:

You have to do a hybrid. Because what you're trying to achieve is agility, but you need scale. And so those [software project] teams are very agile, but they have a hard time scaling. In a couple ways. One, they don't have the personnel to build out deep systems. The other one is that they're not necessarily thinking about the long term. They're really more tactical in their orientation. So you have to have other people who worry about that stuff. And so part of what we're looking at is trying to create certain parameters for them to follow in the early stages so that they don't create something that's just completely incompatible with the rest of our company. So, there's certain tools or certain languages that we don't necessarily want them to build on. Because it would be hard to reintegrate them. But then what we want to be able to do is, as they mature, you sort of want to be

able to cascade them down to the core organization and free these guys up to go keep doing more of the innovative stuff. Basically, at some point the cost of ownership overwhelms the ability to innovate. And so you want to have sort of your core organization be excellent at ownership. And another piece of it be good at innovation. The other way we're getting at this is by breaking out our brands. We're going to create different brand teams or product teams. And they'll have a leader and they'll be more self-contained as well. So we will be creating more teams to improve speed and agility. And then they'll be supported by certain functions that remain core—in terms of the operational ones, or the ones that are good at cost-of-ownership. So we've built a platform [SkyPad] over the last four years that scales very well and is very flexible to build new sites on top of. So the idea is that you build up sites that look completely different, but they all sit on top of the common platform. They're all served by the same servers. You can keep your operations cost very low, but you're capable of handling any volume of traffic that comes in.

In other words, the coordination involved in the rise of niche brands and flexible platforms is fueling provincialism, not belying it. And as Couldry (2008) suggests, even the groups that are “good at ownership” and fall within the more traditional hierarchical structure of the company can be viewed as heterogeneous engineers; if they have less authority, this can be seen as an asymmetry of resources. Even the growth of flexible platforms, as we've seen, is driven by provincial motives aimed at enrolling more users while saving labor and resources. And as Deuze (2007) notes, this proliferation of provincial groups and project teams is representative in this regard of many large media companies.

Finally, not all the groups engaged in system building are defined from the top down. New distribution channels like blogs and Twitter accounts, can be initiated by editorial groups rather than by managerial decree. And where this occurs, it's easy to see the forging of new distribution channels as a provincial act of system building, aimed at enrolling and taking advantage of available resources. Indeed, if we describe sub brands as "niche" editorial products, we've already suggested that there is opportunity to be had in filling said niches, opening the door to a wide range of opportunistic and provincial motives.

Closing Thoughts

Throughout this chapter I have foregrounded a notion that, at one point, I called "mass reach without mass mediation" to describe the increasingly common relationship between niche brands and editorial cultures on the one hand, and developers building highly flexible software architectures on the other, both aimed at enrolling as many user-system builders as possible. But it's important to qualify this observation. After all, this is a manuscript ultimately bent on examining the systems involved in putting *television* news online. The framework of heterogeneous engineering has taught us that, to do so, we have to step outside *a priori* categories to look at actors and overlapping systems that at first glance may appear to have little to do with television or with news. But while we will probably one day receive nearly all of our television content over the Internet, for the immediate future we are still fundamentally talking about the online presence of a mass medium. Conaway, for instance, was quick to point out that while getting Maddow Blog content to circulate still involved carefully building relationships with users and other bloggers, the television program by itself gave the blog a great deal of

exposure, not just by pointing to the URL, but by actually putting blog content on the air. Especially if or when MSNBC TV and/or NBC News move into their own Websites, we should expect to see them—in true heterogenous engineering fashion—press the advantage given them by broadcast and its ability to aggregate attention in promoting their Web presence, from featuring blog content on the air as in Conaway’s example, to suggesting Twitter hashtags in the chyron graphics of network programming (Joyella, 2011).⁹⁰

The division of television content into brands aimed at different audiences long predates the Internet, and even cable (Turow, 2004). Before there was an MSNBC TV channel for news and commentary with a progressive political bent, there were niche editorial products on the air, from network children’s programming to the Black Entertainment Television cable network. What’s different now is that online media companies, including those that distribute TV news, depend on their audiences—or, as Jay Rosen (2006b) famously put it, “the people formerly known as the audience”—in fundamentally new ways. Media companies can no longer conceive of audiences merely as consumers. Rather, as we’ve seen they’ve become a fundamental part of the distribution path forged by system builders at MSNBC.com, MSNBC TV, and elsewhere. We’ve come to view users as heterogeneous engineers whose decisions about when to consume, when to pass along, and when to incorporate media texts into the “ongoing concern of their daily lives” (Law, 1987, p. 133) are based on whether or how they can serve as resources in unfolding local teleologies—whether that means the maintenance of friendships through forwarding links of mutual interest or writing scathing reviews of television programming on one’s personal blog with the help of an embeddable video player. The realities of this distribution environment put

⁹⁰ Conversely, I was told that some television programs that attracted older, less Internet-savvy audiences were more difficult to maintain an online presence for, given that audiences were less likely to look up the show’s content online, let alone engage with it in helpful or lucrative ways.

pressure on system builders at MSNBC that are reflected in their media products, which are increasingly divvied up to fit online brands to suit every interest and need, while technological platforms are made increasingly flexible to underwrite this trend. And once again, organizational boundaries don't align neatly with the systems we've encountered. Multipurpose third-party tools like Twitter and Vimeo are in play, and the public facing interfaces of the company's own products, like the online video player, are similarly being made increasingly flexible, to allow users to further slice, dice, and adapt media products to suit their provincial heterogeneous projects.

From a societal standpoint we might worry, as did postwar critics of American mass media like Horkheimer and Adorno (1991/1944), that these products are still not diverse enough. Conversely we might fret that the niche editorial strategies surrounding market segmentation will disrupt our political culture (Sunstein, 2007) or that the logic of market segmentation is fundamentally flawed in other ways (Turow, 2004). We might also take a critical stance toward the manner in which system builders who host our public discourse through the development of online social media and commenting platforms go about their business (Gillespie, 2010). At the beginning of this manuscript I suggest that media sociology, and particularly the sociology of news, have tended to skip in their focus between media production and audience effects, leaving a mysterious gulf when it comes to understanding the process by which information gets to audiences. In the previous two chapters, I have attempted to begin filling in some of these holes, which in turn has enabled us now to explore in a new way some of the connections between production and consumption that occur through the development of distribution strategies. In doing so, we've opened the door to furthering our debates about the civic impact of media by

beginning to understand some of the common mechanisms through which heterogeneous engineers online seek mass influence and mass reach without mass media.

chapter five // conclusion

One of the great myths of our media culture is that technology and dumb luck conspire to make stars—that many people become successful simply by being in the right place at the right time when a new communication technology comes along. It’s a “great myth” both in the sense of being pervasive on the one hand, and highly enjoyable on the other. In the classic musical *Singin’ in the Rain*, for instance, Jean Hagen’s character is a star of silent film when the era of talkie pictures arrives and—after a bit of ensuing hilarity—exposes her garish voice, thus ending her career while at the same time plucking her mellifluous replacement from obscurity. Versions of this story are told over and over again, not just about art but about our news media as well. In the 1987 film, *Broadcast News*, William Hurt plays a vapid sportscaster whose talent for live television vaults him into the anchor chair at a major news network, while the same medium creates a glass ceiling for ace correspondent Albert Brooks, whose extensive talents don’t include the on-air charisma or multi-tasking requirements of live studio broadcasting. In our fiction, these stories are often morality tales—Jean Hagen’s character was a horrible person who deserved her comeuppance at the hands of sound technology, while *Broadcast News* took the form of a critique of the titular industry. But in real life we have similar stories, too. I’ll give one example.

Conducting live television interviews by satellite was a difficult skill to master when the technology became widespread among news networks in the late 1970s. While audiences watching satellite interviews saw an anchor conversing with one or more guests on a projection screen, they ultimately were watching special effects—in actuality the host was carrying on a

lively conversation with a piece of green foamboard while listening to the guest's voice piped into an earpiece. Unsurprisingly, many anchors had difficulty simultaneously asking incisive questions while conducting this sort of play acting. In 1979, *America Held Hostage* (the precursor to *Nightline*) was one of the news programs making the most extensive use of satellite links, calling upon hosts to not just conduct interviews, but moderate debates between two and three guests at a time. Ted Koppel was initially merely a fill-in anchor for the program, and not necessarily a favorite of then-ABC News chief Roone Arledge, but his seemingly unique aptitude for the process is widely regarded as having moved him to the front of the line and made him a star:

America Held Hostage was stretching technology to its limits...requiring different skills than most anchors were called upon to exercise. The consensus at ABC...was that Koppel looked more than comfortable. He looked like he was having fun. (Koppel & Gibson, 1996, pp. 17-18)

Thus, goes the story, a new technology uncovered a hidden talent and elevated its possessor above the ranks of his peers whose skills were adapted to earlier forms.

I call these sorts of stories myths, not because there is no truth to them. Aptitudes and technologies are often well suited to one another. *Nightline* itself is a 25-year visual record of Koppel's remote interviewing skills. What I contest is the technologically determinist veneer of these stories. While the Internet might easily be seen as the latest assemblage of technologies plucking individuals and companies from obscurity, over the course of this dissertation, I've attempted to remove this determinist wrapping, revealing a world of system builders—heterogeneous engineers, lashing together diverse resources to *create* the information

environment in which their skills are privileged and in which their products can travel.

Opportunities may be contingent upon particular technological configurations and developments, but even when they are, it is never a simple matter of the technology selecting for the person, the company, or the project team.

Another contemporary analogue to the Koppel story in television news might be Jake Tapper—also an ABC News correspondent—whose talent for online reporting was widely seen as having made him one of the network success stories of the 2004 Presidential campaign season, after which he ultimately landed the coveted job of White House correspondent. But as soon as we scratch the surface, we discover that this was not a simple matter of Tapper and his Internet skills being a perfect fit for the place and the time. Rather, as Ed O’Keefe, ABC News’ senior producer for special projects and innovation told me in 2009, Tapper and others worked hard to create an environment at the network where blogging was valued:

He should be credited in large degree with really pushing ABC News to see the value, realize the value of the Web space, and what could be done with it. He’s got one of our most popular blogs, Political Punch, which he has maintained strenuously for the last three years or so. And it really hit its high-water mark during the 2008 election. He was assigned to cover then-Senator Barack Obama. And he used that blog as one of his main reporting tools. Everything that happened, everything that was going on, he reported it out on Political Punch.

In recent years, Internet technologies have increasingly been the subjects of this media myth, with largely unknown bloggers and YouTube personalities rising to become political consultants, television commentators, and even Hollywood directors. But once we see the online world as a

sea of system builders carving voltas out of the available resources, we can cease to marvel at the star-making power of technology itself, which turns out to be a fiction, while deepening our appreciation and wonder at the ingenuity of the heterogeneous engineers themselves.

MSNBC TV and its sister company, MSNBC.com are unique in many ways. But at the same time, there are many organizations—to lean briefly on a term I’ve now problematized—that share many of its characteristics. There are, of course, other network and 24-hour television news operations with similarly complicated internal workings when it comes to their Websites. The online presence of CBS News, for instance, is served by a sister company, CBS Interactive, in much the same way MSNBC.com provides online services for NBC News. And, as Lotz (2007) has noted, many born-digital media companies have risen to become challengers to traditional television corporations online.

In fact, companies like Yahoo! and AOL make up some of MSNBC.com’s leading competitors. AOL’s recent transformation into a media company has resulted in a huge video network, as well as a diverse collection of blogs, brands, and sites aimed at leveraging different segments of the news market in much the same way the MSNBC Digital Network has done (Huffington Post, 2011). On the television front, many network news divisions have long toyed with the idea of distributing their costs through the creation of, or partnership with, a 24-hour cable network (Collins, 2004), and such discussions continue. CNN and CBS News have recently discussed the idea of a partnership (Goldman, 2010), as have Bloomberg News and ABC News (Stelter & Carter, 2010). There are thus many television news organizations with striking resemblances to the one I have examined here, whose online distribution efforts we

could understand in richer and more interesting ways were we to break them down into relativistic collections of overlapping systems.

Beyond television news, many of the trends and concepts identified here are relevant to the study of any large media organization with lots of moving parts. Conceptualizing the balance of structure and agency as a matter of isometric pressure gives us a language for exploring how change occurs within media organizations. Revealing organizational boundaries as constructs, put in place to marshal resources, demonstrates how many of the same principles apply outside of institutional contexts. And finally, bridging the gap in media research between content production and content consumption allows us to see how the dynamics of our contemporary distribution environment might inform our thinking about the public discourse.

At this point I have, I hope, demonstrated the applicability of the framework I've outlined in this manuscript to a broad variety of contexts—not just other television or online news organizations, but other sorts of content providers, other sorts of platforms, and even independent users determined to get ahold of, and often distribute, content on their own terms by whatever means necessary. Thinking about the media distribution landscape in this way inserts a healthy dose of dynamism and agency back into media sociology that has, for some time, looked to structure—professional norms, markets, institutions, news values—to explain so much in the operation of our media in general, and our news in particular. Perhaps more than that, I hope this perspective helps in opening the door for media scholars to different kinds of theories of sociological practice, that understand structure and agency but refuse to use them as binaries, that see sociological practice as a dynamic interplay of assembled materials and forces and people and meanings.

In mapping out the relatively small corner of the media landscape occupied by MSNBC, I demonstrated how distribution—not just the concept, but the day to day mechanics of it—is deeply relevant to the public discourse. I discovered how small groups within organizations were able to bring about substantial changes in the way content is distributed online by large organizations. I uncovered numerous white label players, like Transpera and Zumobi, now integral to the distribution of television content online that didn't exist when the foundational texts of media sociology were written, and other companies, like Nexidia, which at first blush appear to have little to do with television or news at all. A systems approach to online distribution has brought all of these under one roof.

So many of the concepts in this dissertation—local teleology, isometric pressure, vantage point—were developed by looking at a comparatively tiny corner of the media landscape. In future studies, I would like to take this lens of systems sociology to other distribution systems, present and historical, online and off. I expect that in taking this project to other environs, I will discover that many big changes in our media landscape have been brought from surprising places, that there are system builders who have long been, and continue to be, essential to media distribution that have seldom been treated by media sociology, and that many nuances remain to be added to the framework outlined here as I put it into conversation with new cases.

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appendix a // common terms and acronyms

ANT	Actor Network Theory, a theoretical framework originating with sociologists of science and technology.
Blue Site	The flagship news site run by the company, MSNBC.com, which resides at the domain MSNBC.com. The term was invented internally to distinguish the site from the company that runs it.
Green Site	The nickname of the social news site started by Newsvine, which resides at Newsvine.com
M1/M2/M3	These are version numbers for the software architecture underlying Newsvine's Web applications.
MOS	Microsoft Operations Support, the tech support group at Microsoft responsible for troubleshooting technical problems with MSNBC.com properties.
MSNBC.com	The MSNBC-branded Website, which began as a joint venture between Microsoft and NBC. MSNBC.com also refers to the company responsible for this site. The company is also sometimes referred to as the MSNBC Digital Network.
MSNBC TV	The MSNBC-branded cable channel, which began as a joint venture between Microsoft and NBC, and is currently owned entirely by NBCUniversal.

SCOT	Social Construction of Technology, a theoretical framework originating with sociologists of technology.
TRMS	The Rachel Maddow Show, a primetime program on MSNBC TV

appendix b // notes on methods

It was important to me to respect the fact that I was investigating public companies, granted access inside their workings, and interviewing people in their place of business. As such, I received written permission in advance for access to each field site. I have three separate access agreements for (1) the Newsvine offices in Seattle, signed by Mike Davidson, CEO of Newsvine; (2) The Rachel Maddow Show offices at MSNBC TV in New York, signed by Bill Wolff, Vice President of Primetime Programming at MSNBC TV, and (3) the MSNBC.com offices in New York, signed by Jesamyn Go, manager of MSNBC TV and NBC News sites on MSNBC.com. Of the three, one site—the New York MSNBC.com offices—required me to sign a “Microsoft Event Participation and Confidentiality Agreement,” which states that, as a condition of access, redistribution of non-public information gleaned from my observational activities is prohibited unless agreed upon.

As a result of this agreement, I rely especially heavily on interview, rather than observation, data in this manuscript. Moreover, owing to the sensitive nature of some of my sources’ positions and some of the information they shared, as part of the human subjects agreement for this dissertation, they were given an opportunity to review their quotes prior to them being made public. Only quotes approved for public consumption, then, appear in this dissertation, and in some cases they have been amended slightly in accordance with a source’s wishes—at times to clarify points, and at other times to remove information or select opinions that could potentially subject the interviewee to reprimand. Where I have used observational

data, such as in my descriptions of the process of transcoding video at MSNBC.com, I have sought permission to describe what I observed.